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# SHORT-HAND

W. P. UPHAM



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A

BRIEF HISTORY

OF THE

ART OF STENOGRAPHY,

WITH A

PROPOSED NEW SYSTEM

OF

PHONETIC SHORT-HAND

BY

WILLIAM P. UPHAM.

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SALEM, MASS.

ESSEX INSTITUTE,

1877.

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TO  
HENRY WHEATLAND, M. D.,  
PRESIDENT OF THE ESSEX INSTITUTE,  
THIS VOLUME IS DEDICATED  
AS A  
TOKEN OF REGARD FOR HIS DISINTERESTED DEVOTION  
TO THE  
ADVANCEMENT OF KNOWLEDGE.



## PREFACE.

THE necessity for rapid writing, arising from the increased activity of business and professional life, naturally calls attention to short-hand writing as a substitute in many cases for the common method. Although this art has, in recent times, been used principally as a means of reporting speech, its advantages for many other purposes of writing, where rapidity is required, are becoming more and more generally recognized. This increasing interest in the use of stenography for common purposes suggests inquiry as to the merits of the different short-hand systems, and as to the possibility of improvement upon those which have thus far been published.

The following work contains, in Part I, a brief history of stenography with a particular account of the earliest system of which anything definite is known, viz., the "Tironian Notes," or Roman method of short-hand, and a description of many of the systems published during the last three centuries. The Roman short-hand is illustrated by several fac-simile specimens taken from the works of Gruter, Mabillon, and Carpentier. In Part II, is exhibited a new system of phonetic short-hand intended for use in literary composition, business correspondence, writing from dictation, taking notes of lectures, addresses or evidence, and making copies or extracts for reference. A largely extended list of word-signs and abbreviations, such as is required in any system

(v)

of short-hand to adapt it to *verbatim* reporting, would, for the purposes above mentioned, be an unnecessary burden to the memory of the student. If any one should desire to use this system for reporting, he can easily supply such a list by selecting such words and phrases as experience and the nature of the discourse to be reported shall show to be most convenient for special abbreviation.

The writer, having satisfied himself (perhaps with the partiality of an author for his own work) of the usefulness of the system here proposed, originally intended to print a few copies for private distribution. Being requested, however, to make it the subject of a lecture before the Essex Institute, he has since been induced to prepare it for more general publication. Much of the material for the historical account contained in Part I is taken from previous works on the subject, which are therein more particularly referred to; and some of the principles upon which the proposed system is constructed are derived from a study of the various methods of short-hand writing heretofore used. In the choice of the forms for the short-hand characters, and in the phonetic analysis which forms the basis of the system, the writer has preferred to follow, independently, the methods suggested by his own experience and investigation, rather than rely upon theories often too implicitly received as authoritative guides.

W. P. U.

SALEM, May 1, 1877.

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PART I.

HISTORY OF STENOGRAPHY.



## CHAPTER I.

### ORIGIN OF SHORT-HAND WRITING.

SHORT-HAND writing, though understood and practised by comparatively few persons, has always been regarded as possessing a high value and importance, both as an aid to literary labor, and as a means of preserving extemporary discourse. A brief account of the origin and growth of this art, and of some of the principal methods of short-hand that have prevailed in former times, may be not without interest as a matter of curious history, and may also have some value as a guide in the study of ancient manuscripts in which short-hand writing occurs. Many of the principles now recognized as most necessary to render such a method of writing practically useful, were either laid down in the old systems of short-hand, or have been suggested by a comparative study of them.

The term *short-hand*, in its general signification, denotes any abbreviated or contracted method of writing having for its object compactness or celerity, and consisting in the use of word-signs, abbreviations, or special characters more suitable for rapid writing than the ordinary letters. The usual writing is sometimes called *long-hand* to distinguish it from the shorter method. Among the various names applied to this art that which is now most generally used to denote

short-hand writing of any kind, is *stenography*, from the Greek, *στενός*, *contracted*, and *γραφη*, *writing*.

Where the short-hand is based upon the ordinary alphabet, or upon a series of characters arranged to conform to the ordinary alphabet, it may be called *alphabetic* short-hand, the word *alphabet* being derived from the Greek names for the two first letters *a* and *b*. Where, on the other hand, it is based upon a series of characters representing the articulate sounds of speech without regard to the ordinary alphabet, it is called, to distinguish it from the former, *phonetic* short-hand; the word *phonetic* being derived from the Greek word *φωνη*, *the voice*, or *a sound of the voice*.

Although most of the systems that have existed in former times were alphabetic, phonetic short-hand—that is, short-hand following the *sound* without regard to the ordinary spelling—is by no means a recent invention, for many of the very numerous systems devised during the last two or three centuries have had such a phonetic structure. This phonetic principle was very skilfully applied to the construction of a short-hand alphabet, in the system invented by Isaac Pitman, first published at London in 1837, and since, with various modifications, extensively adopted in England and in the United States. The name *phonography*, which Pitman gave to his system, is sometimes erroneously used as designating any phonetic system of short-hand. The word *phonography*, by its derivation, signifies *voice-writing* or *sound-writing*.

The art of short-hand writing, in its alphabetic form at least, comes down to us from a remote antiquity. It is said that the

Greeks had under the name of *ταχυγράφοι* "quick-writers," and *σημειογράφοι* "writers by signs," scribes who practised the art of writing with the rapidity of speech. Diogenes Laertius in his life of Xenophon,<sup>1</sup> the famous general, philosopher and historian, states that "he first of all, taking notes of what was spoken, published the memorable things he had written down."<sup>2</sup> In this manner the conversations of Socrates, now known as the *Memorabilia*, were preserved by Xenophon, his pupil. Although from such evidence it has been generally considered that the art of short-hand was communicated to the Greeks by Xenophon, if he were not the inventor of it,<sup>3</sup> there is reason to doubt whether he used any characters different from the ordinary letters, as no traces of their employment exist in his writings.<sup>4</sup> Probably his system was one simply of abbreviations enabling him to make memoranda of what he heard, which he afterwards filled out from memory.

The highest, and at the same time the most difficult, end which this art of short-hand has in view, is the ability to "follow speech" or to "report verbatim;" that is, to take down in writing the words of a speaker as rapidly as they are uttered. One can easily understand, therefore, that such an art would naturally be developed with the increase of free institutions, popular discourses and scientific or philosophical

---

(<sup>1</sup> Born about the year 430 B. C.)

(<sup>2</sup> Καὶ πρῶτος ὑποσημειωσάμενος τὰ λεγόμενα, εἰς ἀνθρώπους ἤγαγεν, ἀπομνημονεύματα ἐπιγραφάς.

(<sup>3</sup> Horne's Introduction to the Study of Bibliography, London 1814, p. 118.)

(<sup>4</sup> Historical Account of Short-Hand, Lewis, p. 22.)

discussions. The acute perception and inventive genius of the Greeks could hardly fail to hit upon some method of writing which would enable them to preserve the memory of the eloquent harangues of their orators, or to fix in undying characters the wise precepts and almost inspired thoughts of the great masters of philosophy. Although but little is known as to the history of short-hand writing in ancient times, there is sufficient evidence to show a frequent use of it among the early Greeks, and that it flourished most during the period of the highest civilization, and fell into disuse with its decline.

Among other improvements in science and the arts which followed the conquest of Greece by the Romans, the method of rapid writing, which appears then to have been much employed by Greek writers, was introduced into Italy, and, about the time of the establishment of the Roman Empire, gave rise to a distinct profession; the scribes who practised the art being called *notarii*, and the characters or signs which they used being called *notæ*. The art was taught by masters or special professors; and during the reign of Augustus there existed in the Empire as many as three hundred schools where gratuitous instruction was given.<sup>5</sup> The word *notæ*, or "notes" was also used to designate another kind of writing where the ordinary letters were used, one or two letters of a word being substituted for the word itself for the sake of brevity; as M, for Marcus, Cos, for Consul, P. R.

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<sup>5</sup> Histoire de Stenographie, Scott de Martinville, Paris, 1849.

for *Populus Romanus*, etc.; or one letter being substituted for another for secrecy; thus Suetonius relates of Cæsar (chap. 56), and of Augustus (chap. 88), that they used such a method substituting *b* for *a*, *c* for *b*, etc. This writing was called *notæ literæ*, the short-hand notes being called *notæ non literæ*. Writers upon this subject have sometimes confounded these two kinds of *notes*. The use of short-hand writing under the name of *notæ Tironianæ*, or *notæ Tironis ac Senecæ*, continued for nearly a thousand years; but during the latter part of that period it was only employed as a compendious method of writing in manuscripts and in public documents, such as capitularies or codices containing ecclesiastical or civil codes and regulations. The *notæ* fell into disuse in France toward the close of the ninth century, and in Germany at the end of the tenth century. After that time scarcely any of them appear in manuscripts except the abbreviations of *et* by the sign 7, and of *us* at the end of words by 9;<sup>6</sup> to which might be added perhaps the dash — placed over a word to indicate the omission of *m* or *n*.

The early writers give us no definite description of this ancient system of short-hand, and our knowledge of its nature is derived only from a few manuscripts, written in what are called the *notæ Tironianæ*, none of which probably are older than the fifth or sixth century.<sup>7</sup> From what we

---

<sup>6</sup> Horne's Introduction, cited above. He refers to Petisci Lexicon tom. 2, p. 277; Lambinet, Recherches pp. 32-5; and Peignot, Dict. tom. 2, pp. 297-9.

<sup>7</sup> The absence of any specimens of short-hand writing during the earlier centuries is accounted for by the perishable nature of the material used, namely, a tablet spread with a layer of wax and written upon with an iron style.—Lewis, p. 23.

can learn of it the method appears to have consisted in the employment of a very great number of signs composed of characters, and representing each a particular word in the Latin language. The most distinctive letter or syllable of a word was represented by a special character, and the rest of the word was more or less fully indicated by additional characters placed above, below, or at the side of the first character.

In the few specimens that we have of this ancient shorthand writing it is evident that the same letter or the same syllable is not always represented by the same character, nor does each character always have the same signification. Indeed this want of uniformity, and of any fixed rule of structure, is so great as to give to the writing the appearance of being composed of mere signs for words, wholly arbitrary, or simply ideographic, like the arbitrary marks that were used in connection with the ancient Egyptian hieroglyphics, or those which are supposed to form the basis of the Chinese writing. Whether this was characteristic of the "Tironian notes" at the time the system was first invented, or whether, as would be more likely, it is owing to the subsequent additions that were made to its list of word-signs, and to changes in the manner of its use from time to time, is a matter of uncertainty. In the form in which it has been transmitted to us it certainly seems very poorly adapted to the purpose of following speech, both from the complex form of many of its word-signs, and from the almost incredible exertion of memory that must have been necessary in order



to make any rapid use of so great a number of arbitrary characters. It cannot be doubted, however, that a very rapid system of short-hand existed in the time of Cicero and during the first years of the Roman Empire. The name *notæ Tironianæ*, or *Tironian notes*, is derived from Tiro, the *libertus* or "freedman" of Cicero, who is said to have improved and reduced to order a system of short-hand invented by the poet Ennius.<sup>8</sup> Sallust has preserved in his history of Catiline a speech by Cato against Cæsar in the Roman Senate, which Tiro is said to have taken down at its delivery by means of these short-hand notes. Plutarch, in his life of Cato the Younger, relates that "Of Cato's speeches this alone, it is said, has been preserved; for Cicero, the Consul, had placed about in various parts of the Senate Chamber the most expert writers, having previously taught them the use of notes (*σημεία*) which expressed by minute and short strokes many letters. For they did not at that time have or employ the so-called short-hand writers (*σημειογράφους*), but then first, as it is said, do traces of them appear."

---

<sup>8</sup>Born in the year 239, B. C.

## CHAPTER II.

### REFERENCES TO SHORT-HAND BY ANCIENT AUTHORS.

THE following passages from the early Roman writers show the perfection to which this art had been carried, and the admiration with which its successful use was regarded. Seneca, the Philosopher, says, in his ninetieth Epistle, "*Quid loquar verborum notas, quibus, quamvis citata excipitur oratio, et celeritatem linguæ manus sequitur? Vilissimorum mancipiorum ista commenta sunt.*" "What shall I say of the notes for words, by which, however rapidly a speech may be delivered, the hand follows the quickness of the tongue. These are the invention of the despised slaves."<sup>1</sup> Martial's epigram 208, book 14, celebrates the skill of the *notarius*.

"Currant verba licet, manus est velocior illis,  
Nondum lingua suum, dextra peregit opus."

"Though the words run, the hand runs swifter than they; before the tongue has finished, the right hand has completed its work."

Ausonius, a celebrated Roman poet of the fourth century, pays his tribute to short-hand as follows. (Epigram 146).

AD NOTARIUM VELOCISSE EXCIPIENTEM.

"Puer, notarum præpetum  
Solers minister, advola.  
Bipatens pugillar expedi,

---

<sup>1</sup> Much of the writing among the Romans was done by slaves, or freedmen, among whom were many persons of intelligence and learning, such as Tiro the freedman and friend of Cicero.

Cui multa fandi copia,  
Punctis peracta singulis,  
Ut una vox absolvitur.  
Evolvo libros uberes,  
Instarque densæ grandinis  
Torrente lingua perstrepo.  
Tibi nec aures ambigunt,  
Nec occupatur pagina.  
Et mota parce dextera  
Volat per æquor cereum.  
Cum maxime nunc proloquor,  
Circumloquentis ambitu,  
Tu sensa nostri pectoris  
Ut dicta jam ceris tenes.  
Sentire tam velox mihi  
Vellem dedisset mens mea,  
Quam præpetis dextræ fuga  
Tu me loquentem prævenis.  
Quis, quæso, quis me prodidit?  
Quis ista jam dixit tibi,  
Quæ cogitabam dicere?  
Quæ furta corde in intimo  
Exercet ales dextera?  
Quis ordo rerum tam novus,  
Veniat in aures ut tuas,  
Quod lingua nondum absolverit?  
Doctrina non hæc præstitit  
Nec ulla tam velox manus  
Celeripedis compendii.  
Natura munus hoc tibi,  
Deusque donum tradidit:  
Quæ loquerer ut scires prius;  
Idemque velles, quod volo.

TO THE MOST SWIFTLY REPORTING *notarius*.

"Hasten, youth, skilled in the swift short-hand. Bring hither the two-leaved tablet on which are so many words by single points expressed, as a single sound is uttered. I unrol the well filled books, and like a storm of dense hail I rapidly read. Thou hearest all rightly, and yet thy page is not filled. Thy hand deftly moved flies over the waxen surface. Even now, while my speech is most prolix with round-about circumlocution, thou hast fixed on the waxen tablets the thoughts of my breast while they are uttered. I would

that my mind could have thought as swift as thy skilful right hand. Thou anticipatest my speech. Who, I ask, who has betrayed me? Who has already told you of what I was thinking to say? What thefts in my inmost heart has your winged right hand committed? What is this new order of things, that that should come to your ears which the tongue had not yet spoken? No learning has caused it; no other hand is so swift with the flying contractions. Nature has brought thee the skill, and God the gift has bestowed, that what I would speak thou should'st know, and what I might wish, thou should'st wish."

To the same effect are the lines of Manilius, an early Roman poet, referring to the fortune of him who should be born under the sign Virgo (*Astronomica*, book 4). .

Hic et scriptor erit felix, cui litera verbum est,  
 Quique notis linguam superet, cursumque loquentis.  
 Excipiet longas nova per compendia voces.

"And he shall be the fortunate writer to whom a letter is a word. By his notes he shall surpass the tongue and the quickness of speech. He shall take down long sentences by new contractions."

In a hymn upon the death of Cassianus, who was slain by his scholars using their styles, or writing instruments, as weapons, Prudentius, a poet of the fourth century, thus describes the teacher of short-hand :

Præfuerat studiis puerilibus, et grege multo  
 Septus magister literarum sederat  
 Verba notis brevibus comprehendere cuncta paratus  
 Raptimque punctis dicta præpetibus sequi.

"The master of the school presided over the youthful studies, and sat enclosed by a great multitude prepared to take down all words by short notes, and swiftly to follow the speech with flying points."

These high encomiums and graphic descriptions, although much allowance should be made for poetic exaggeration, seem to justify the belief that the short-hand system in use among the Romans nearly two thousand years ago must have been capable of being employed for reporting speech. If we can form any opinion as to the nature of that system from the specimens of the Tironian notes, so-called, now extant, or from the general statements of those writers who have referred to this subject, we should conclude that it originated in a simple method of extreme abbreviation, letters being substituted for words, and whole sentences being represented by a few letters. Of course the memory and the context must have been very much depended upon to render such writing legible.

Bishop Wilkins gives the following account of the *notes*, or ancient short-hand.<sup>2</sup>

"These were single *letters* or *marks* whereby the Romans were wont to express whole words. Ennius is said to have invented eleven hundred of these; to which number, Tullius Tyro, Cicero's *libertus* (others say Cicero himself), added divers others, to signify the *particles* of speech; after whom Philargyrus the Samian and Mæcenus added yet more. After these Annæus Seneca is said to have laboured in the regulating and digesting of those former notes; to which adding many of his own he augmented the whole number to five thousand, published by Janus Gruterus; though amongst his there are divers of a later invention, relating to Christian institutions, which have been added since (as 'tis said) by S. Cyprian, the Martyr. The way of writing by these did require a vast memory and labour."

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<sup>2</sup> Essay towards a Real Character, &c., London, 1668, p. 13.

That Cicero was familiar with short-hand is evident from the following passage in his letter to Atticus (lib. xiii, epist. 32) : *Et, quod ad te de decem legatis scripsi, parum intellexisti; credo, quia διὰ σημείων scripseram.* "You did not understand what I wrote to you concerning the ten deputies, because, I suppose, I wrote in short-hand." Carpentier, whose work will be hereafter mentioned, thinks that the use of the Greek word for short-hand, *σημεία*, by Cicero, and also by Plutarch (see above p. 7), indicates that the art was borrowed from the Greeks, and that Cicero could not be the inventor of it, "as Plutarch would not have defrauded him of the praise justly due him, nor would Cicero himself have left it to be commemorated by others."

## CHAPTER III.

### SPECIMENS OF ROMAN SHORT-HAND.

THE *notæ* were published in 1603 by Gruter, under the title *Notæ Romanorum Veterum, quibus litera verbum facit, Tullii Tironis et Annæi Senecæ erutæque nunc primum editæque*. In an edition of Gruter's Inscriptions, by Grævius, Amsterdam, 1707, his list of the *Notæ Tironis ac Senecæ* is given as an appendix. The editor, in his preface, remarks that, although "no author can be assigned to them with certainty, it is probable that some few were in use in the beginning, whether invented by Tiro or by some other, and that they were increased by the industry of later times. Thus Vossius, lib. iv *de vitio sermonis*, cap. ii, rightly thinks that very many additions were made to this system by later writers; which is indeed quite evident from the number of words in it abhorrent to the Augustan age, and even barbarous. Reinesius (*ad inscriptionem cv classis primæ*) thinks it was the work of the fifth century. . . . Salmasius refers it to the time of Gregory the Great, who lived at the end of the sixth century, because in an ancient book on these notes he had seen a preface in which the compiler dedicates his book to Pope Gregory, and states that he collected these notes by his command." Attention is also called to the names of the Roman emperors given in the list of these

notes published by Gruter, the last name being that of Antoninus, which would indicate that the date of these notes was not long after the reign of that emperor (A. D. 138—161).

A few of the "notes" taken from the first page of Gruter's list will serve as specimens. The whole list comprises several thousand words and terminations arranged in columns without any particular order, and rather rudely engraved; a sort of *moles indigesta*, as Carpentier calls it, not very encouraging to one who would hope to find in it a key to the Roman system of short-hand.

de	per	ne	an
di	pro	ni	ac
dis	pre	num	nescio
ex	re	enim	nescit
ad	se	et	alit
con	sibi	sese	me
in	trans	circum	super
ob	a	circa	tibi

A small table of the same "Tironian notes" is given by Mabillon (*De Re Diplomatica*, Lutetiæ Parisiorum, 1681, p. 457), from which I take the following:

a	fecit	panem	tuo
bonis	gloria	quia	tua
cor	nos	regis	via
deus	omnibus	suas	tibi



A very full account of these "Tironian notes," together with representations of certain charters or decrees of Louis the Pious, successor of Charlemagne, written in these short-hand characters in a royal codex of the ninth century, was published in 1747, at Paris, by Pierre Carpentier, under the title "*Alphabetum Tironianum, seu Notas Tironis explicandi Methodus*," &c. The system seems to be substantially, if not wholly, the same as that of the notes given by Gruter and by Mabillon. Carpentier does not give any alphabet of the characters for letters, but arranges in alphabetical order about six hundred words with the signs that represent them. From this list it appears that twenty-one letters were represented by at least sixty-seven characters, a different character being used for the same letter in different words. In fact, the system seems to be devoid of any certain or uniform rule. Numerous tables of signs for terminations are added in which the same irregularity and uncertainty is apparent.

The following is a representation of one of the charters of Louis the Pious, written in these "notes" during the early part of the ninth century, copied from a fac-simile given by Carpentier. I have altered the division of the lines in order to bring it to the width of the page, but have preserved the size of the characters and the closeness of the writing, so as to show the general appearance and the degree of compactness of the original. I also give Carpentier's Latin version.

Each portion of the version indicated by the figure in the margin corresponds to one line of the short-hand fac-simile.



8. vivere, et homines Christianos ad eorum opera facienda locare, exceptis festis et diebus Dominicis. Habeant etiam licentiam mancipia peregrina emere, et infra
9. imperium nostrum vendere, et nemo fidelium nostrorum præsumat eorum mancipia peregrina sine eorum consensu ac voluntate baptizare. Quod si Christianus causam vel litem
10. contra eos habuerit, tres idoneos testes Christianos et tres Hebræos similiter idoneos in testimonium suum assumat, et cum eis causam suam judicet. Et si causam
11. vel litem contra Christianum habuerint, Christianos testes in testimonium sibi adhibeant, et cum eis convincant. Nam si aliquis illorum, Christianus aut Judæus, veritatem occultare
12. voluerit, comes loci illius per veram inquisitionem faciat unumquemque illorum secundum legem suam veritatem dicere. Quod si etiam aliquæ causæ adversus eos de
13. rebus, vel mancipiis eorum surrexerint vel ortæ fuerint, quæ infra patriam absque gravi et iniquo dispendio definitæ esse nequiverint, usque ad
14. præsentiam nostram sint suspensæ vel conservatæ, qualiter ibi secundum legem finitivam accipiant sententiam. Et hæc omnibus vobis notum esse volumus ut jam
15. quia supra scriptos Hebræos sub mundeburdo et defensione nostra suscepimus. Quicumque in morte eorum, quamdiu fideles nobis exstiterint, consiliaverit aut aliquem ex
16. illis interfecerit, sciat se ad partem palatii nostri decem libras auri persoluturum, et nemo sæpe dictis Hebræis flagellis cedere præsumat,
17. nisi probati fuerint secundum legem eorum eos capita, quæ a nobis eis servanda promulgata sunt, violasse atque interdicta fecisse, in
18. quibus similiter defluvit est pro quibus culpis flagellis sint cædendi. Hauc vero auctoritatem. . . . .

In the following translation I have endeavored to give the meaning as nearly as possible; but some of the mediæval Latin words are of doubtful significance.

#### CHARTER XXXIII.

"To all bishops, etc. Be it known that we receive and take under our protection these present Jews [David, David's uncle, and Joseph and Ammonicus, their companions,] dwelling in the city of Lyons. Wherefore, by our present

authority we decree and command, that neither you, nor your subordinates, nor your successors shall presume to accuse or calumniate the said Jews on any unlawful occasion whatsoever; nor dare to take or injure any of the property which they now are known to possess by lawful means in any places whatsoever; nor to utter ever at any time any calumny against them; nor presume to exact from the aforesaid Jews any [tax for customs, post-horse, lodging, labor, turf, river-bank, highways, harbors, roads, bridges, or gateways;] but that it may be permitted to them under our patronage and protection to live in peace and faithfully to attend to the offices of our palace. Likewise we grant them the right to make exchange of their goods with whatsoever men they may wish; and it shall be permitted to them to live according to their law, and to hire Christian men to perform their work except on festival days or the Lord's days. They shall also have license to purchase foreign slaves and to sell them within our empire, and no one of our faithful [subjects] shall presume to baptize their foreign slaves without their consent and will. If a Christian shall have cause or suit against them he shall bring for his evidence three credible Christian witnesses, and likewise three credible Jews, and with them shall try his cause. And if they shall have cause or suit against a Christian they shall bring Christian witnesses for their evidence, and with them shall prove their case. But if any one of them, Christian or Jew, shall endeavor to conceal the truth, the officer [*comes*] of that place shall by true inquiry cause each of them to tell the truth according to his law. If also any causes relating to their goods or slaves shall have arisen or been commenced, which cannot be disposed of within the district [*patriam*] without heavy and unjust expense they shall be suspended or kept for our presence that they may there receive final decision according to law. And this we wish known to you all, that we have now taken the above mentioned Jews under our patronage and protection. Whosoever shall counsel their

death, or shall kill any one of them, as long as they shall remain faithful to us, shall forfeit ten pounds to the service of our court; and no one shall presume to whip with scourges the often aforesaid Jews unless they shall have been proved according to their law to have violated the articles which have been promulgated by us to be observed by them, and to have done that which is forbidden; in which articles it is also stated for what crimes they shall be scourged . . . .”

The following is a representation of another of these charters, the words being separated for the convenience of the reader.

## [CHARTA XLV.]

h' denariariorum et imperialis

Notum sit igitur omnibus fidelibus nostris, presentibus scilicet et futuris, quia nos pro mercedis nostre augmento servum nostrum, nomine illum, in procerum nostrorum presentia, manu propria nostra excutientes

## [CHARTA XLV.]

## CHARTA DENARIALIS ET IMPERIALIS.

1. Notum sit igitur omnibus fidelibus nostris, presentibus scilicet et futuris, quia nos pro mercedis nostre
2. augmento servum nostrum, nomine illum, in procerum nostrorum presentia, manu propria nostra excutientes

3. a manu ejus denarium, secundum legem Salicam liberum fecimus, ejusque
4. absolutionem per præsentem auctoritatem nostram confirmamus, atque nostris et futuris
5. temporibus firmiter atque inviolabiliter mansuram esse volumus. Præcipientes ergo
6. jubemus, ut sicut reliqui manumissi, qui per hujusmodi titulum absolutionis a regibus
7. vel imperatoribus a jugo servitutis noscuntur esse relaxati ingenui, ita deinceps memoratus
8. ille per hoc nostrum præceptum plenius in Dei nomine confirmatum, nullo inquietante,
9. Deo auxiliante, perpetuis temporibus valcat permanere bene ingenuus
10. atque securus. Et ut hæc auctoritas firmitior habeatur et per futura tempora melius conservetur . . . . .

## CHARTER XLV.

## CHARTER DENARIAL AND IMPERIAL.

"Be it known to all our faithful subjects both present and future that we, for the increase of our revenue, have made free our slave, called . . . , in the presence of our nobles, striking out with our own hand, from his hand, a *denarius* according to the Salic Law, and by our present authority we do confirm his freedom and wish it so to continue firm and inviolable for our and the future times. Having thus ordered we now command, that, as other manumitted slaves who by a title of this kind are known to have been released from the yoke of slavery by kings or emperors, so also the said . . . , by virtue of this decree fully confirmed in the name of God, shall, God helping, remain free and secure for all time, no one molesting him. And that this authority may be held more firm and the better observed for the future . . . . ."

## CHAPTER IV.

### PROBABLE ORIGIN OF THE ROMAN SHORT-HAND.

ALTHOUGH it is evident both from the tables of Gruter and from the specimens of Carpentier that the same letter was very often represented by several entirely different characters, and on the other hand that the same character often represented entirely different letters, yet one can discern what might have been the original alphabet of the system, and some at least of the characters have a marked resemblance to the ancient Roman letters. Carpentier observes in his preface that "there is another kind of *notes* which are called *singulariæ*, more recently *siglæ*, in Greek *σῆλαι*, because single letters expressed a word. Of this sort examples are common; S. P. Q. R., *Senatus Populusque Romanus*; P. R. E., *post reges exactos*; A. A. S. L. M., *apud agrum sibi locum monumenti*; B. A., *bonam actionem*, or *bonis auspiciis*, or *bonis avibus*; which may be seen in Valerius Probus, Peter Diaconus and Magno; all which Sertorius Ursatus has collected together and arranged. And I could easily believe that this system of notation was more used by the ancients, since it is easier and swifter." He then cites a passage from Valerius Probus, to the effect, that before the short-hand notes were used it was the custom with those who could write, especially in the Roman Senate, to note down by the first

letters certain words and names for the sake of brevity. This method of abbreviation was afterwards much used in manuscripts on account of the scarcity and cost of parchment. In manuscripts of the eleventh century scarcely a line occurs where there are not from eight to ten abbreviations, and finally public documents were rendered so obscure by their use that laws were passed to put a stop to the practice. In printed editions of the fifteenth century the abbreviations are so numerous and so complex as not only to fatigue the reader but even to render the sense unintelligible.<sup>1</sup>

There is reason to believe that the Tironian notes grew out of this earlier system of the *singulariæ*, or *notæ literæ*, and that the single letters were at first written in full, but

I	h	3	C	5	Y	—	/	^	4	H	I	K	L
A	B	C	D	E	F	G	H	I	K	L			
M	Z	0	1	9	P	~	f	7	U	+	Y		
M	N	O	P	Q	R	S	T	V	X	Z			

afterwards in a contracted manner, and variously altered, either in direction or form, to distinguish different words beginning with the same letter; marks for terminations being subsequently added to the system. Supposing this to be the case we reproduce, as above, the original alphabet; selecting

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<sup>1</sup> See Horne's Introduction, cited above; also Savage's Dictionary of the Art of Printing, London, 1841.



from the various forms representing each letter, in the specimens transmitted to us, that which would seem to have been most naturally derived from the ordinary Roman letter.

From the statement by Plutarch, that Cicero stationed several scribes in different parts of the Senate chamber to take down the speech of Cato, we may infer that the custom prevailed then, as in modern times, of employing a considerable number of short-hand writers at the same time so as to relieve each other at short intervals. St. Augustine speaks, in his epistle CLII, of eight notaries assisting at his discourses, four on his part and four named by others, who relieved each other and wrote two and two, in order that nothing which he taught might be omitted or altered. St. Jerome had four notaries and six *librarii* or "transcribers"; the former wrote at his dictation by notes, and the latter transcribed at length in the ordinary letters that which the notaries had written.<sup>2</sup>

The system of reporting in the French Chamber of Deputies before 1849 is described as consisting in the simultaneous employment of "nine *rouleurs* (that is, stenographers, who relieved each other every two or three minutes), and four *reviseurs* (that is, the most skilful stenographers), who write (notent) for twelve or fifteen minutes at a time, and are charged also with the oversight and correction of the work of the *rouleurs*.<sup>3</sup> A similar method is adopted by the reporters in the House of Representatives at Washington;

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<sup>2</sup> Encyclopédie, *tachygraphie*.

<sup>3</sup> Histoire de Sténographie, cited above.

each one reporting for a certain number of minutes, and then, while another takes his place, carrying his notes to the reporter's room where they are written out in long-hand; so that within a few minutes after a member has finished a speech a page can hand him the whole for his revision.

In the time of Justinian, contracts, written by the notaries in abridged writing or characters, were not binding until they had been transcribed or written out in full, and an edict was issued by him forbidding the employment of these abbreviations for the future in public writings, on account of the ambiguity which might arise from the resemblance of the signs. As already stated, their use ceased entirely in the tenth century. The decline of literature in the following centuries caused them to fall into such oblivion that a short-hand Book of Psalms, which Trithemius mentions as found by him in a monastery, was entitled, in the catalogue of the convent, "A Psalter in the Armenian language." The possession of such manuscripts was, in those days of ignorance and superstition, considered proof of sorcery and witchcraft, and both the manuscripts and their owners were ruthlessly consigned to the flames.

## CHAPTER V.

### MODERN SYSTEMS OF SHORT-HAND.

AFTER the disappearance of the *notæ* there seems to have been no revival of the art of short-hand until the latter part of the sixteenth century, when a Mr. Ratcliff, of Plymouth, in England, is said to have proposed a kind of short-hand writing by retaining the ordinary letters, but omitting the vowels and such consonants or even syllables as could be spared without rendering the writing unintelligible. This system was published at London, in 1688, after the death of the author. In 1588, a system by Timothy Bright, called "Characterie, An Art of Short, Swift, and Secret writing, by Character," was published at London, in which, as in the Tironian notes, each word was represented by a distinct sign, the whole being arranged in the form of a dictionary.

The first attempt to invent a short-hand alphabet was by John Willis, whose "Art of Stenographie or Short-Writing" was published at London in 1602. An interesting description of his system is given in "An Historical Account of Short-Hand" by James Henry Lewis,<sup>1</sup> by which it appears that Willis omitted such letters as are superfluous or imperfectly sounded, and employed two sizes for each character, distinguishing most of the vowels and diphthongs by the junc-

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<sup>1</sup> Printed at London without date, but soon after the year 1815.

tion of the small character to the large, or the large to the small in various positions. The short vowels he expressed by dots. He also made use of *symbolical* and *special* abbreviations. Some of the characters in his alphabet representing simple letters were compounded of more simple characters already used for other letters, a defect which continued in all the systems which succeeded that of Willis until the invention of the loop system, published by Byrom, in 1767. Another defect of this system, and of the others founded on a similar plan, is that the characters do not readily join to form words.

John Willis's system was used by Thomas Lechford, author of "Plaine Dealing or Newes from New England's Present Government," &c., London, 1642. (See edition by J. Hammond Trumbull, Boston, 1867, pp. xxxviii and xl.)

During the two hundred years which followed the publication of Willis's work, a great number of systems were published in England, many of them, however, differing only in some of the characters or in the directions for writing. The alphabets of nearly all of them are exhibited by Lewis in his book above referred to. As that book is now rare<sup>2</sup> I have reproduced, in the two accompanying tables, forty-four of these alphabets, leaving out only those which are less important as being wholly or nearly like others that had preceded them (see after p. 45). A reference to these may be a convenience as a partial guide to those who have occasion either to study the history of the art, or to decipher short-hand

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<sup>2</sup> The only copy I have met with is in the Boston Public Library.

manuscripts of that period. It should be observed, however, that the value of a system cannot always be measured by its alphabet alone. For a more particular description of the various systems I would refer the reader to the account given by Lewis, whose extended investigation and ingenious criticisms render his work an authority on the subject. At the conclusion of his account, Lewis makes the following statement: "My library of Short-hand books, and manuscript curiosities in the art, are (I believe) unrivalled in this, or any other country. Many of the volumes described in the present publication are *unique*, and have only been collected at a great expense of time and labor . . . . My collection has cost me more than fifteen years labor, and an expense of more than five hundred pounds."

I have also selected a few of Lewis' observations on some of these systems, as pointing out the successive improvements in the art.

In the system of Edmond Willis (1618 and 1627) the vowels and diphthongs are expressed "by dots or letters placed about a character" in various positions. He also employed "a number of marks (drawn from the alphabet) to represent the *double and treble consonants* that begin and end words." He noticed the frequency of *l* and *r* as a second letter in initial double consonants; and that *h*, *l*, *m*, *n* and *r* when initial are followed by a vowel. He also suggested a sort of mental short-hand practice, advising the learner to imagine the short-hand for words casually heard.

Theophilus Metcalfe (1645) denoted the vowel between

two consonants by placing the second consonant in the vowel position (a method used some years before ; see below p. 32).

The system of Jeremiah Rich (1669), which resembled that of Metcalfe, furnished a foundation for those of Nathaniel Stringer, Samuel Botley, William Addy (1695), Henry Barmby (1700), Samuel Lane (1716), and Philip Doddridge (1805).

"The most celebrated short-hand writer of the 17th century was William Mason" (1672, 1682 and 1707). His system, as well as that of Rich, is said to have been chiefly remarkable for methods of contraction by the use of dots and other marks in various positions. The systems of John West (1690), Thomas Gurney (1753), John Angell (1758), James Swaine and Joseph Simms (1761), and Edward Hodgson (1766), were founded upon Mason's.

Elisha Coles (1674) represented *repetitions* by the use of a hyphen, or underscoring ; also a difference in monosyllables by a difference in position.

Abraham Nicholas (1692) represented vowels and diphthongs by the position of dots, or of the following consonant character. His characters for the consonants are derived partly from the ordinary letters.

James Weston's alphabet (1727 and 1745) was the same as that of Metcalfe (1645). He employed the dot as a sign of termination. A part of his book consisted of a "Dictionary, or an Alphabetical Table, containing almost all the words in the English tongue, with the Short-hand over against each word." A number of books were printed in

his characters, among which were a grammar, a dictionary, the psalms, the New Testament, and many books of the Church.

In Jeake's system (1748), the vowels *a, e, i, o*, and the *h* are suppressed, and the remaining nineteen letters grouped as follows : *d, t,—l, r,—m, n,—u, w,—c, s, x z,—b, f, p, v,—g, j, k, q,—y*; each group having but one character assigned to it.

Gurney's system (1753) was founded upon Mason's. It has been practised in the courts of law, and under government patronage in England by his family and descendants to the present day. (See *Encyclopædia Britannica*, 8th Edition, *Stenography*.)

The "Art of Short-Hand Improved" by David Lyle, London, 1762, was based upon principles different from those of any preceding system. In his preface he observes that "to carry the art to a greater degree of perfection, these four ends ought to be kept in view. 1. The most simple characters possible ought to be found out, and their conveniency of writing and joining considered, in order to signify all the principal simple sounds and their modifications, and as many compound ones as can be done in a convenient and short manner. 2. An inquiry must be made into the English language, with a view to find out and state in order all the principal sounds and modifications of sound, together with their letters; and to point out those sounds and modifications of sound which are most frequently used and combined. 3. Of these characters, those which are most easily wrote

and joined, must be assumed to signify the letters, or the sounds and modifications, which are most frequently used and combined with one another. 4. The whole ought to be abridged as far as possible, to leave it intelligible." In selecting his characters he made use of elliptic as well as circular curves, and also of straight lines, points, loops, &c., producing an unusual variety of forms. This enabled him to present a list of some four or five thousand words and phrases, with short-hand signs, which have the appearance of remarkable brevity; but this advantage is counterbalanced by the fact that the abbreviations are too extreme for legibility, and the characters require too much exactness in the writing.

The "Universal English Short-Hand," by John Byrom (1767), receives high praise from Lewis, and is said to form a new era in the history of the art. He expressed the vowels by dots in five positions; classed the letters according to their affinity of sound, and adapted his characters to this classification. For these he chose the simplest straight lines and segments of the circle. Having regard, however, to the beauty and convenience of the writing, he adopted the expedient of allowing for some of the letters the use of several characters differing in direction, and also made use of the circle or loop combined with the straight line or curve. His characters were remarkably simple and well adapted for joining together. He also devised some ingenious methods of abbreviating words and phrases. The following is his arrangement of the consonant sounds:



*p, b, f, v. t, d, th, dh. m, n, l, r, h.*  
*s, z, sh, zh. k, g, ch, j.*

Many systems have been more or less derived from that of Byrom, as, for instance, that of Aulay Macaulay (1747), and that of Thomas Molineux (1804.) According to Lewis, Macaulay's was largely derived from the unpublished manuscript of Byrom's system.

The system of W. J. Blanchard (1786), is said by Lewis to far surpass all that had preceded it, particularly in regard to methods of contraction.

The "New System of Short-hand," by Richard Roe (1802), is described as "the first attempt to construct an alphabet sloping uniformly in one direction."

Beside the alphabets given by Lewis there was also that of [Rev. Thomas] Archisden, mentioned in a letter from England by Edward Howes to John Winthrop, jr., Nov. 23, 1632. The letter and the alphabet are printed in the Massachusetts Historical Society Collections, 4th ser., vol. vi, p. 481. The writer says, "As for my usual characters, they are that wherewith I conceive you have been formerly acquainted, vizt. Mr. Arkisdens . . . I thought good to send you his character for fear you should have forgotten it, as thus." (See alphabet No. 45 of the accompanying plate.) "They are approved of in Cambridge to be the best as yet invented; and they are not yet printed nor common."

This alphabet resembles very closely that of Edmond Willis (1618). A very similar alphabet was used by Ralph

Fogg, the first clerk of the Quarter Court established at Salem, Mass., in 1636, and also at the same time the town clerk of Salem. From his short-hand minutes on his court records and town records (written during the years 1636-1639), I obtain the characters given in alphabet No. 46 in the accompanying plate.

He expressed the vowels by dots in five positions about the preceding character, as in the system of Edmond Willis. Vowels between two consonants he omitted, placing the second consonant in the vowel place, as in the system afterwards published by Metcalfe (1645). A similar system was used by President Edward Holyoke, in his short-hand sermons now in the manuscript collection of the Essex Institute; and also by Samuel Parris, the minister of Salem Village in 1692; and by Thomas Blowers, minister at Beverly (1701-29).<sup>3</sup>

Among the curiosities of the art may be mentioned the systems of Richardson (1800), and of Blanc (Paris, 1801). The former made use of two perpendicular and three horizontal lines, placing the character for the second letter of a word in a particular position on these lines, thereby indicating the first letter and saving the necessity of writing its character. The latter made use of the principle of the musical staff, his letters being represented by a short stroke or

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<sup>3</sup> The alphabet used by John Hull in his Diary, of which a description is given in the "*Archæologia Americana*" (*Am. Antiq. Socy.*), Vol. III, p. 279, seems to be nearly the same.

curve written across, above, or below, one of four horizontal lines.

The system of Rev. W. E. Scovil, of which the sixth American edition was published at New York in 1874, resembles the alphabetic systems of the last century, and, as stated in his preface, is indebted to Macaulay in particular for many of the characters.<sup>4</sup> Although his alphabet has full characters for the vowels, he also provides a list of smaller signs to be placed about the consonant character, in various positions, so as to indicate an omitted vowel or diphthong.

Among the alphabetic systems, that of Samuel Taylor, published at London in 1786, seems to possess great advantage for simplicity and brevity, although perhaps at too great a sacrifice of legibility. The title is as follows: "An Essay intended to establish a Standard for an universal system of Stenography, or Short-Hand writing, upon such simple and approved principles as have never before been offered to the public, whereby a person in a few days may instruct himself to write short-hand correctly, and by a little practice cannot fail taking down any discourse delivered in public. By Samuel Taylor, many years Professor and Teacher of the Science at Oxford, and the Universities of Scotland and Ireland."

This has been much used both in England and in this country, and also in France, the system of Bertin (Paris,

1792) being a modification of it. The same system, copied bodily, without acknowledgment, from Taylor's book, was published at Boston in 1809. (See alphabet No. 47 in the accompanying plate.)

In his introduction, Taylor points out what he considers the defects of preceding systems, viz., badly chosen characters, the representation of prepositions and terminations by separated characters, the use of arbitraries and symbols, too great similarity of characters, and finally the method of joining words together expressing only the initials of each. To avoid these objections he reduces the number of sounds for which distinct characters are to be provided, to twenty, viz., *b, d, f* or *v, g* or *j, h, k* or *q, l, m, n, p, r, s, t, w, x, y, ch, sh, th*, and the termination *ious*. (See No. 39 in the accompanying table of alphabets.) He represents *ch* by a curve turned in the opposite direction to that of the character for *j*; *sh* by a hook prefixed to the character for *s*; *th* by a hook prefixed to the character for *t*; and *ious* by a hook at the end of the character for *s*. Vowels in the middle of words he omits. When they begin or end a word he expresses them, if strongly pronounced, by a *dot*, no distinction being made between the different vowels. Diphthongs and final *y* are treated as vowels. His characters for *b, m*, and *p* are perhaps not well chosen, being more difficult for initials than simple curves would be; but he states that *b* may often be omitted. The loop forms may be turned either way in joining. He omits *h* in the middle of words, and very often at the beginning. Certain common terminations are denoted

by a dot or short stroke in various positions. The character for *d* is written downwards, and the same stroke upwards is used for *r* when joined to another letter.

An abstract from one of his plates will show the brevity of the writing.

.1 - e . 9 2 4 \ d 1 u < l . ~ . m 4 l i - - - m . 11  
 r / > - 4 1 . e l m q o e u d r l e \ e u e y r v l  
 \ m o d l k z \ m r u ~ \ e u o g l . l ) l i m y  
 \ o d 4 l e i n o y d l . y g u . e u d o m \ d l .  
 l r . u . 2 v f r l . l v . p y d l p l \ l e , - l o  
 e \ . 1 u y m - l . y \ m u l n d e - e . 9 . o  
 v . . 2 9 - l l . o d l . o o d - . e l r / q . l l e  
 u ~ g y . l l . l e \ l m o r r l l o e \ . o d r d . ~  
 l u y o o l i - y l y u e o - e y u l \ y l . t ~

[In the above some of the words are expressed by their initials. The following is the same in *long-hand*.]

"It has been observed by writers of morality, that in order to quicken human industry, providence has so contrived it, that our daily food is not to be procured without much pains and labour. The chase of birds and beasts, the several arts of fishing, with all the different kinds of agriculture, are necessary scenes of business, and give employment to the greatest part of mankind. If we look into the brute creation, we find all its individuals engaged in a painful and laborious way of life, to procure a necessary subsistence for themselves, or those that grow up under them. The preservation of their being, is the whole business of it. An idle man is therefore a kind of monster in the creation. All nature is busy about him; every animal he sees reproaches

him. Let such a man, who lies as a burthen or dead weight upon the species, and contributes nothing either to the riches of the commonwealth, or to the maintenance of himself or family, consider that instinct with which providence has endowed the ant, and by which is exhibited an example of industry to rational creatures."

Various attempts have been made to avoid the use of detached dots or marks for vowels and diphthongs, among which may be mentioned, as possessing many points of excellence, the "Complete Guide to the Art of Writing Short-Hand," by Thomas Towndrow, Boston, 1837. (See No. 48 in the table of alphabets). The author in his preface quotes from Lewis's "Ready Writer, or Ne Plus Ultra of Short-Hand," to show that "the mode of expressing the stenographic vowels by means of points is not only an enemy to legibility, but is also calculated to destroy the purpose of expedition." This is very clearly shown by calling attention to the fact that in making a detached dot, point, or mark, not only must the intervening space be passed over as much as if a line were described, but a certain portion of time must be lost in the mere raising and lowering of the pen. He expresses his surprise that Lewis, after so clearly pointing out the defect of this method, should himself, in a great measure, run into the very same error.

During the same year, 1837, the phonetic system of Isaac Pitman, known as "phonography," was first published at London. Pitman's system, with various modifications of it by Graham, Munson and others, has been very extensively used both in England and in this country. The use of de-

tached dots and marks for vowels and diphthongs, and the distinction made between *light* and *heavy* strokes, reduces very much the number of sounds for which characters distinct in form are to be provided. The characters for consonants, therefore, are exceedingly simple, being either a straight line in one of four directions or a quarter circle in one of eight positions; and by the omission of vowels and diphthongs a remarkable degree of rapidity can be attained in the writing, especially if the distinction between the light and heavy strokes be disregarded. One advantage of the use of detached marks for vowels and diphthongs is, that in rapid writing, the consonants may be written alone, forming a sort of "skeleton" of the word, and the vowels or diphthongs may be afterwards inserted at leisure. To this method, however, many serious objections are urged, and efforts have been made to construct a system upon a plan similar to Pitman's, but providing characters for vowels and diphthongs capable of being joined to the consonant characters, so that words may be written without lifting the pen.

The system of David P. Lindsley, entitled "The Elements of Tachygraphy," Boston, 1869, has a list of "vocal signs" for vowels and diphthongs, consisting of small marks or points which resemble those of Pitman, but are to be written at the beginning or end of the consonant character instead of being detached. He has not, however, succeeded in wholly avoiding the use of detached marks for vowel sounds; and he retains the expedient of *light* and *heavy* strokes. The minuteness of the "vocal signs" renders careful writing necessary, for which numerous rules and directions are given.

The consonant-characters are the same in form as those of Pitman, being either straight lines or quarter circles; but they are differently distributed among the consonant sounds. The double consonants are represented by hooked signs as in Pitman's system. The author claims that the two great principles of continuity and lineality, which had been apprehended by some of the stenographic writers, but were overlooked by phonographers, have at last been "secured in Tachygraphy by connective vowels and a skilful arrangement of the consonant letters." "Experience," he remarks, "is more reliable than theory; and the practical success of a particular method is of more value than any explanation of the philosophy by which that success is gained. Yet the seductiveness of brief forms, attained at no matter how much sacrifice of simplicity and legibility, is so great, that those with but little experience are very likely to be deceived. There is something fascinating in the beautiful devices for contraction that leads the student forward step by step; and he is unwilling to leave anything unlearned that the science renders possible." In this connection he makes the very judicious observation, that, "if the student memorizes a greater number of details than he can command readily, they burden the mind, hinder speed in writing, and finally lead to disgust and failure." Like many other systems, that of Tachygraphy possesses two "styles," one style in which the system is adapted for reporting, and another "fully-written" style, adapted for the less rapid kind of writing.



## CHAPTER VI.

### CONCLUSION.

IN concluding this brief history of stenography I would mention, without attempting to particularly describe them, two systems resembling each other in this, that each is developed in connection with another invention having for its object a sort of universal language. The first is that of Bishop Wilkins in his "Essay towards a Real Character and a Philosophical Language," printed for the Royal Society, at London, in 1668; and the second is the "Universal Line-Writing and Steno-Phonography, on the basis of 'Visible Speech,'" by Alexander Melville Bell, published at London in 1869.

Bishop Wilkins, in his most remarkable and ingenious work, having first arranged "all such things and notions as fall under discourse," according to a philosophical analysis into *genera, species, differences*, etc., proceeds to invent a language in which each sound represents a definite idea; and also a writing or "real character" in which each mark represents likewise a definite idea. This "real character" is a horizontal line with various marks joined to it so as to indicate the "genus," "species," &c., of the idea to be represented. For pronouns, prepositions, adverbs, modes, &c., he makes use of dots, strokes or points placed above, on,

or below the line of the "real character." To complete his work he added also two kinds of writing for representing sounds, the one being "more facile and *simple*, the other more *complicate*, but with this advantage, that it hath in the shape of it some resemblance to that configuration which there is in the organs of speech upon the framing of [the] several letters, upon which account it may deserve the name of a natural character of the letters." In the first or more simple writing, the consonants are represented by perpendicular lines or curves distinguished from each other by small marks at the top or bottom. The vowels are represented by loops or hooks at the top, middle, or bottom of the consonant character. In the other method of writing, each sound is represented by a figure intended to resemble the configuration of the organs of speech and the nature of the utterance. To make this more plain there are engraved pictures exhibiting the position of the mouth parts for each sound. His arrangement of the consonants shows a careful study of the true nature of their distinction. I omit those not used in English pronunciation.

Tongue.	Root.	Inmost palate.	c	g	ng														
	Top.	Foremost palate or root of the teeth.	t	d	n	th	dh	l	r	sh	zh	s	z						
One Lip.		The other Lip Tops of the teeth.	p	b	m	f	v												

In the above table *c*, *g*, *ng*, *th*, *dh*, *sh*, and *zh*, have respectively the sounds as heard in the following words: *car*, *go*, *sing*, *thin*, *then*, *sheer*, *azure*.

The consonants are described as those letters "in the pro-

nouncing of which the breath is intercepted by some collision or closure amongst the instruments of speech ;” the vowels being those in the pronunciation of which “the breath is freely emitted.” He calls the vowels *ō*, *ō*, *á*, *ǎ*, *ā*, and *e* “greater.” The “lesser vowels” are divided into

“*Sonorous*; of which it may be said, that they do somewhat approach to the nature of consonants, and are *medice potestatis*; because when they are joyned with any Vowel to compose that which we call a Diphthong, they put on the nature of *Consonants*; and when they are not so joyned, but used singly, they retain the nature of *Vowels*, which is the reason why it hath been so much disputed amongst some Learned Men, whether they are to be reckoned amongst Vowels or Consonants.

These may be distinguished into

*Labial*; by an emission of the breath through the Lips, more *Contracted* (w) [as in *we*, or *oo* as in *food*].<sup>1</sup>

*Lingual*; when the breath is emitted betwixt the middle of the Tongue in a more *Convex* posture and the palate (y) [as in *ye*, *symbol*, *thy*, or *I* as in *his*].

*Guttural*; by a free emission of the breath from the Throat (ū) [as in *up*].

*Mute*; When the breath is emitted through the Organs of speech, being in the same position as before : but without voice ; to be distinguished as their three preceding correspondents, into

*Labial* (hw) or (wh) [as in *where*]

*Lingual* (hy) [as in *hew* ?]

*Guttural* (h).”

<sup>1</sup> The words enclosed in brackets I have added in order to explain the sounds intended to be represented.

He considers *j* (as in *jeer*) a compound of *d* and *zh*, and *ch* (as in *cheer*) a compound of *t* and *sh*. The distinction between what are commonly called the *hard* and *soft* consonants (*p* and *b*, *t* and *d*, etc.,) is denoted by the words *mute* and *sonorous* (or *vocal*) the latter having, as he expresses it, "some kind of vocal sound." He makes twenty-four "usual diphthongs," all composed of the sound *y* (as in *yard*), or *w* (as in *word*), which he treats as vowels, either "preposed" or "subjoyned" to another vowel sound.

The short-hand system of A. M. Bell, above alluded to, is founded upon a table of characters, each of which is suggested by the configuration of the organs of speech upon which the pronunciation of the sound represented by it depends. These characters, or symbols, present therefore to the eye, a certain degree of analogy to the sounds represented, on the same principle as that adopted in his "Visible Speech," which is itself an extremely ingenious and extended improvement of the plan proposed by Bishop Wilkins. His analysis of the sounds of speech (including all possible forms of utterance), is very accurate and minute. By a skilful use of abbreviations and arbitrary characters he provides a system of short-hand apparently well suited for reporting.

The foregoing sketch of the origin and progress of the art of stenography shows the importance that has been attached to it by many ingenious and learned men, and the unceasing effort that has been made to devise a system of short-hand which shall combine these three requisites, *simplicity*, *legibility* and *brevity*.

Whether anything still remains to be done to more fully accomplish this object, or whether one system may not be better suited for one kind of writing and another system for another kind, is a question worthy of consideration.

The "phonographic" systems founded on Pitman's alphabet are now the most generally used, and are thought by many to constitute the final perfection of the art. Probably no other systems have been so skilfully elaborated and improved upon from time to time, and none have had the benefit of so wide a circulation and of such earnest and persistent efforts to secure their general adoption. Like the system of Taylor (described above p. 33) Pitman's "Phonography" reduces as much as possible the number of sounds for which characters distinct in form are to be provided. Taylor reduces them to twenty alphabetic consonants, while Pitman reduces them to twenty-one phonetic consonant-sounds. In Taylor's system a single dot in one position answers for either one of all the vowels and diphthongs, and is only used at the beginning or end of words; an expedient which contributes very much to the simplicity of the system and to the facility with which it may be acquired, although it detracts of course from the legibility of the writing. In Pitman's system on the other hand, the consonant signs only are written first and the other signs added afterwards, more or less fully according to the degree of accuracy required; the latter consisting of dots or marks in various positions about the consonant-characters.

The simplicity of the consonant-characters in Pitman's

alphabet, rendered possible by thus detaching the vowels and diphthongs, causes the phonographic systems to seem remarkably well adapted for the rapid writing of the skilled and practised reporter, who learns to rely on the representation of the consonant-sounds only, and upon the frequent use of word-signs and phrase-signs. For the more ordinary purposes of the less rapid short-hand writing a greater degree of accuracy is, however, required, particularly where the writing is not intended to be made use of immediately. To insure such accuracy the initial and final vowel-sounds need to be represented, and it is often desirable to represent them in the middle of words. If, then, vowel-sounds are to be represented at all, it is of course a disadvantage to the writer to be obliged to do so by taking off the pen and putting in its particular position the detached dot or mark; especially if he has to write the consonant-characters of each word first, and then go back and insert the vowel-marks, or "vocalize the consonant outline," as it is called. One expedient adopted to partially obviate this objection is, to distinguish the accented vowel of a word by writing the consonant outline either above, on, or below the line of writing.

However excellent, therefore, the "phonographic" alphabet may be as a basis for a reporting system, it may be doubted whether it is equally well adapted for the less rapid kind of short-hand writing so often desired in correspondence, composition, taking notes, &c., by persons who cannot devote much time to its study and practice. For these purposes even some of the alphabetic systems might be found more

convenient, as for instance that of Taylor, which is equally concise and much more simple in method; or that of Towndrow, in which each word is written continuously, the vowels and diphthongs being represented by loop-forms easily joined and quickly written, like those employed for some of the consonants in the system of Byrom (1767).

The plates on the two following pages exhibit the alphabets of forty-four systems published from 1602 to 1802, taken from Lewis's Historical Account of Short-hand already referred to; two alphabets of 1632 and 1636 not given by Lewis; and the alphabet of Towndrow published in 1837. The one numbered 47, is a mere copy of that of Taylor (No. 39). On page 48 will be found a list of the names of the authors and the dates of publication of the alphabets exhibited.

[illegible]



[illegible]

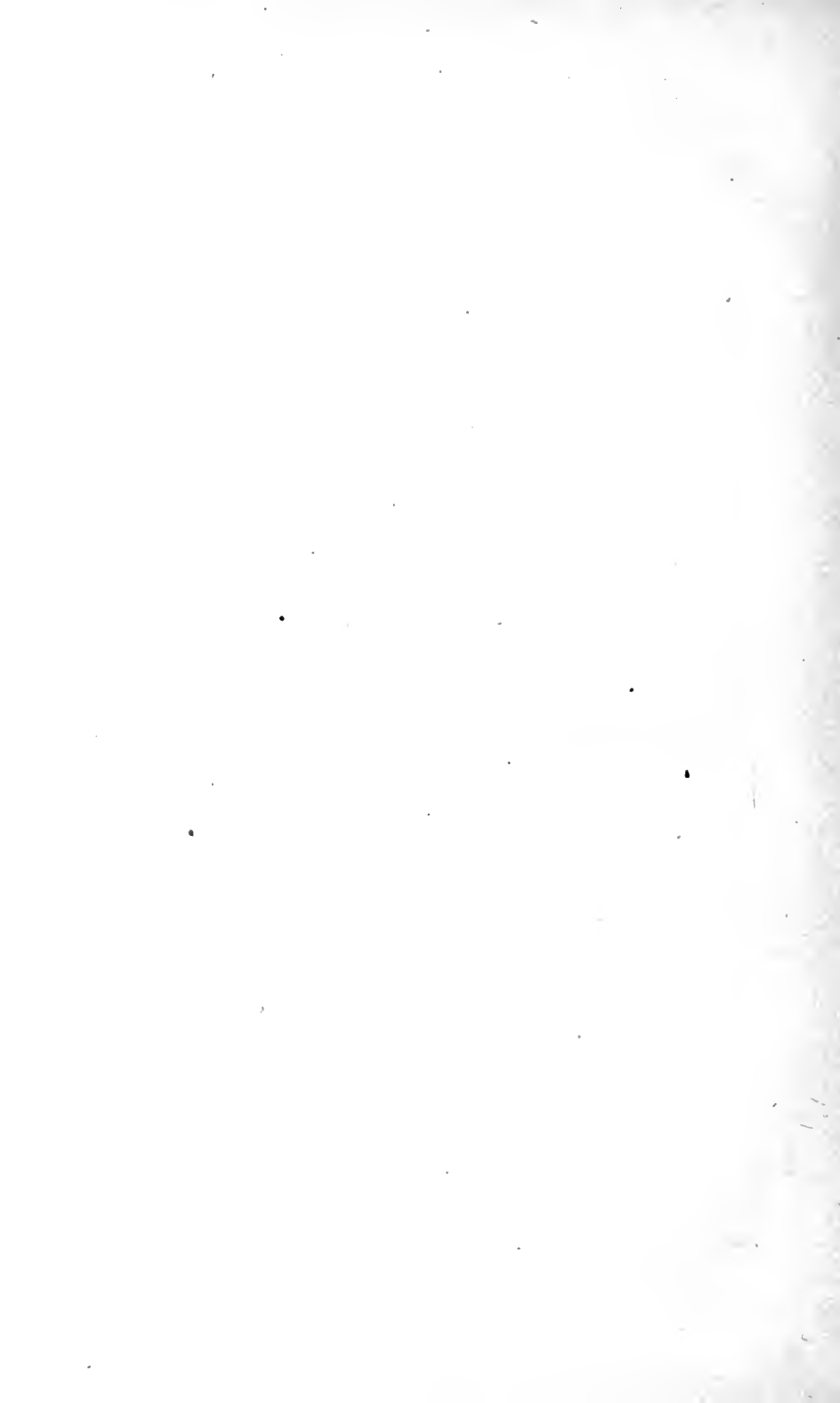
LIST OF THE ALPHABETS EXHIBITED IN THE ACCOMPANYING PLATES.

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No	AUTHOR.	DATE.
1.	John Willis . . . . .	1602
2.	Edmond Willis . . . . .	1618
3.	——— Witt . . . . .	1630
4.	Henry Dix . . . . .	1633
5.	——— Mawd . . . . .	1635
6.	Thomas Shelton . . . . .	1641
7.	Thomas Shelton . . . . .	1650
8.	Theophilus Metcalfe . . . . .	1645
9.	Jeremiah Rich . . . . .	1669
10.	John Farthing . . . . .	1654
11.	Job Everardt . . . . .	1658
12.	Noah Bridges . . . . .	1659
13.	William Mason . . . . .	1672
14.	William Mason . . . . .	1682
15.	William Mason . . . . .	1707
16.	Elisha Coles . . . . .	1674
17.	William Hopkins . . . . .	1674
18.	Lawrence Steel . . . . .	1678
19.	Abraham Nichols . . . . .	1692
20.	Francis Tanner . . . . .	1712
21.	Philip Gibbs . . . . .	1736
22.	Aulay Macaulay . . . . .	1747
23.	Peter Annet . . . . .	1750
24.	Thomas Gurney . . . . .	1753
25.	Henry Taplin . . . . .	1760
26.	Thomas Stackhouse . . . . .	1760
27.	David Lyle . . . . .	1762
28.	Alphabet of Reason . . . . .	1763
29.	Mark Anthony Meilan . . . . .	1764
30.	John Byrom . . . . .	1767
31.	Wm. Holdsworth & Wm. Aldridge . . . . .	1768
32.	R. Graves & S. Ashton . . . . .	1775
33.	Wm. Williamson . . . . .	1775
34.	Thomas Hervey . . . . .	1779
35.	W. J. Blanchard . . . . .	1779
36.	W. J. Blanchard . . . . .	1786
37.	John Mitchell . . . . .	1782
38.	Michael Nash . . . . .	1783
39.	Samuel Taylor . . . . .	1786
40.	William Graham . . . . .	1787
41.	William Mavor . . . . .	1789
42.	Thomas Rees . . . . .	1795
43.	John Crome . . . . .	1801
44.	Richard Roe . . . . .	1802
45.	——— Archisden . . . . .	1632
46.	Ralph Fogg (Salem) . . . . .	1636
47.	(Printed at Boston) . . . . .	1809
48.	Thomas Towndrow . . . . .	1837

PART II.

A NEW SYSTEM OF PHONETIC SHORT-HAND.



## INTRODUCTION.

### § I. *Definition of Phonetic Short-hand.*

A system of short-hand, in which the writing represents the component *sounds* of words without regard to the usual method of spelling, is called *phonetic*, to distinguish it from that kind of short-hand in which the characters are used simply as substitutes for the letters of the alphabet. The latter kind, which may be called *alphabetic* short-hand, was formerly the most in use, and is still practised to some extent; but the phonetic method is now generally considered the most advantageous.

### § II. *Advantages of the Phonetic method.*

Among the many reasons that may be given in favor of the phonetic method for short-hand writing the following are perhaps the most important.

*First.* In following a speaker, if one has to write according to the rules of orthography, his memory is constantly taxed by the irregularity and frequent uncertainty of the usual mode of spelling. His progress, therefore, will always be impeded in proportion as he endeavors to be correct in his spelling. On the other hand, if he uses the phonetic method,

after he has once acquired the habit of writing down the words according to the sound, a habit which a little practice will render familiar and easy, there will no longer be any uncertainty or hesitation. The writing will then be almost mechanical and the memory can be more freely employed in keeping up with the speaker. The importance of this advantage may be shown by referring to some of the more obvious defects of the usual mode of spelling.

Many of the letters are often silent, and many of them have different powers in different words. Of the twenty-six letters of the common alphabet three are duplicates of others, viz., *c*, which is the same as either *k* or *s* in sound; *q*, which is in sound *kw*; and *x*, which is *ks*. The sounds of *th* in *ether* and in *other*, and of *ng* in *singer*, have no single letter to represent them. The following table exemplifies the various powers which some of the consonants have in different words.

*c* in call, cell, ocean, sacrifice.

*d* in day, mixed.

*f* in fine, of.

*g* in give, courage.

*n* in man, banquet.

*s* in sand, please, pleasure, sure.

*x* in tax, exert, anxious, Xenophon.

In Worcester's Dictionary there are distinguished seven sounds of the letter *a*, five of *e*, five of *i*, six of *o*, six of *u* and four of *y*. Beside the uncertainty of sound of many of

the vowel-letters, the same vowel-sound is often represented in various ways, as for instance the long sound of *o* as in *show, though, hoe, moat, note, beau, etc.*

*Second.* By using the phonetic method the writer can take down more readily and accurately names of persons or places, or unusual words of which the proper spelling may be unknown to him or uncertain. The sounds he hears being written down furnish the material from which he can afterwards write out the words according to the proper spelling. In like manner when some words are indistinctly heard, the few sounds that the ear may detect will often serve by the aid of the context to restore the lost words.

### § III. *Phonetic Short-hand not an enemy to Orthography.*

The objection sometimes made that the use of the phonetic method in short-hand may create a tendency to misspell in ordinary long-hand writing could with more reason be urged against alphabetic short-hand. In all the alphabetic systems the rules of orthography are more or less departed from; silent letters and many of the vowels are omitted; and rules are laid down for dropping one of two similar letters coming together in a word, or representing *c* by the character for *k* or by that for *s*, etc. Hence in alphabetic short-hand the writer, although obliged to have the common spelling constantly in mind, always varies from it in his writing; a practice which might well be supposed to cause confusion. In phonetic short-hand, on the contrary, the common spelling

is not in the mind at all, no regard whatever being paid to orthography, so that the two kinds of writing, short-hand and long-hand, are kept entirely distinct.

§ IV. *Plan of the Phonetic System here proposed.*

This system of phonetic short-hand is constructed upon such principles as to afford an easy method of rapid writing for composition, writing that which another dictates, taking notes of lectures, addresses or testimony, etc. For *verbatim* reporting, that is, following a rapid speaker word for word, it would be necessary to largely increase the use of word-signs and abbreviations; expedients which, for such a purpose, must be very much relied upon in any system of short-hand. Although some suggestions are given as to the manner in which such abbreviations can be made, the practical application of the principles stated is left, for the most part, to experience as the best teacher. Another object, kept in view, has been that the writing may be sufficiently exact to be read with ease and accuracy after any interval of time.

The system being adapted to the English language, sounds not properly belonging to it, but which occur in foreign words occasionally introduced, must be represented by the characters for those English sounds which most nearly resemble them. As the writing is phonetic, this can be done without any difficulty, and with sufficient accuracy for all practical purposes.



The following is a brief description of the plan proposed :

*First.* The forms of the characters. In the series of characters which form the basis of this system, as the sounds to be represented have a relation to each other dependent upon the organs of speech with which they are pronounced, so the characters which represent those sounds have a relation to each other in their form or direction. The articulate sounds of speech are grouped together according to a natural order or scale derived from a careful study of their true nature. Certain groups in which the difference of sound is so slight that a mistake of one for the other would not lead to error in the reading, are represented either by the same character, or by characters resembling each other. Those groups, on the other hand, which differ most in sound, are represented by the characters which differ most in form or direction.

*Second.* Description of the characters. Such characters have been chosen as to give to the writing, as far as practicable, some of the advantageous qualities of long-hand writing, viz., that of being somewhat *ideographic* or *pictorial*, which enables us to read words and even sentences at a glance ; that of being *continuous*, forming a cursive or running hand ; and that of maintaining the *horizontal line*.

The characters have distinct forms, and easily join together in such a manner that all the words, except word-signs and abbreviations, may be written continuously, that is, without taking off the pen till the word is finished.

It is generally taken for granted as a rule for the selection

of characters that those for the more frequent sounds ought to consist of the shortest geometric lines and curves. Such a rule is, however, liable to this objection, viz., that the shortest line or curve, when used as a character, *if it diverges from the line of writing*, not only prevents the writing from being horizontal, but requires in reality two movements of the pen (unless it happens to be followed in the same word by another character in the opposite direction); the first movement being that which describes the character, and the second that which returns the pen to the horizontal line of writing. This may be shown by writing a succession of parallel slanting lines, when it will be noticed that allowing the pen to describe, on the paper, connecting strokes between the parallel lines, adds to, rather than diminishes, the speed with which the parallel lines may be written.

In the following example, for instance, the connected double strokes can be made more quickly and easily than the same number of simple parallel strokes.



A simple line or curve which diverges from the horizontal line is not, however, so objectionable, if it occurs at the *end* of a word; and when it occurs at the *beginning* of a word it may be so written as to end on the line of writing. The above objections, therefore, against all the simple lines and curves, except those which are horizontal, are most important in connection with the representation of sounds in the *middle* of a word.

For these reasons I have used most of the simple lines and curves which diverge from the line of writing to represent the less frequent sounds, viz., the *vowels*, which may be very often omitted especially in the middle of a word. The variation of the simple lines and curves in direction also renders them well adapted for vowel-characters, as this variation may be made to correspond to that of the vowel-sounds in the natural scale.

For the frequent consonants *p*, *b*, *t* and *d* the horizontal curves are used; for *k* and *g* the upright curve; and for *s* and *z* the circle; all of which are simple forms.

The characters for *l* and *r* consist of a horizontal line preceded by a short stroke upward to the left for *l*, and downward to the left for *r*. These forms combine readily with the other consonant-characters, and they are, therefore, well adapted to represent consonants which combine so frequently with other consonant-sounds.

The characters for *m* and *n* are straight strokes downward to the left, the first to the line of writing, and the second from the line of writing, with connecting strokes, which may often be dispensed with.

For *f*, *v*, *th* (as *thin*) and *dh* (as in *then*) an upward or downward loop stroke is used. This form of character, though it does not have the simplicity of the straight line or single curve, is made with equal facility, and has the advantage of maintaining the horizontal line of writing. The distinctness in appearance of this character from those used for the other sounds renders it convenient for the few very

frequent words in which it occurs, such as *if, for, of, the, this, that, those, then, there, therefore, other, etc.*

*Third.* Use of difference in *length* or *size* of the characters. The difference between the *short* vowel-sounds and the corresponding *long* vowel-sounds, and also the difference between the two kinds of consonants commonly designated by the words "hard and soft," or "surd and sonant," is denoted in the corresponding characters by a difference in their *length* or *size*. This method is more convenient for the writer than that of using *light* and *heavy* strokes; and may be safely used, since an occasional failure to make the proper distinction will not lead to error in reading, as the context will sufficiently show which of two sounds so closely resembling each other is intended.

*Fourth.* Compound sounds. The compound sounds, which are so numerous and so constantly in use, are represented by distinctive signs combining in a more or less abbreviated form the characters for the component sounds.

*Fifth.* Use of *word-signs*. Word-signs are added for a few of the most common words. To render such signs more easily remembered different classes of words are represented by different sets of signs. The use, to a certain extent, of word-signs which present a different appearance to the eye from that of the rest of the short-hand writing will be found to add to the legibility as well as to the rapidity of the writing.

## CHAPTER I.

### ANALYSIS OF THE ARTICULATE SOUNDS OF THE ENGLISH LANGUAGE.

#### § I. *Necessity of a preliminary analysis.*<sup>1</sup>

1. IN phonetic short-hand writing the spelling must be according to the sound and without regard to the ordinary rules of orthography; the words being represented by a combination of characters which represent to the eye the component sounds as distinguished by the ear. It is necessary, therefore, to learn how to properly distinguish these component sounds or elements of words before one can make use of any phonetic system of short-hand. The ordinary method of spelling is so very far from truly representing the component sounds of words, that the phonetic method seems, to one not accustomed to it, somewhat difficult and even unnatural. This difficulty, however, is soon overcome by a little study and practice; and when once the phonetic method becomes familiar, the spelling will be much less troublesome than in the ordinary writing.

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<sup>1</sup> In preparing this analysis I have been particularly indebted to the following treatises on the subject of phonetics; and to them I would refer the reader for more extended information as to the nature of all articulate sounds, and their relations to each other; the Alphabet of Nature, by Alexander J. Ellis, App. to Phonotypic Journal, Bath, England, 1844. Science of Language, by Max Müller, New York, 1865, pp. 102-196. Oriental and Linguistic Studies, Second Series, by Prof. Wm. D. Whitney, New York, 1874, pp. 202.-300. Also the works of Bishop Wilkins and Alexander M. Bell referred to above, Part I., Chap. VI.

2. The following analysis of the vowel-sounds and consonant-sounds will serve to show the student the manner in which these elements of words are to be distinguished. The arrangement of them in a natural classification, showing their relation to one another, will aid him also in committing to memory the short-hand characters, which have a corresponding order and relation to each other in their forms.

3. The first object of this analysis is to group the sounds in such a manner that they may be easily committed to memory in a natural order, bringing together those which most nearly resemble each other, and indicating with sufficient exactness the particular sound which each character will be used to represent. For this purpose an explanation of the nature of the sounds being necessary, I have made use of the definitions given by the best writers on the subject of phonetics, employing, however, on some points an independent method of analysis and arrangement. The more ambiguous or uncertain terms generally used, such as "mute," "semi-vowel," "whispered," "hard," etc., have been avoided, and an attempt is made to explain the sounds of language by the use of a more clear and definite nomenclature. Though I may not have escaped errors in the treatment of so difficult a subject, I feel confident that none will be found of sufficient importance to impair the usefulness of this analysis for the purposes intended.

## § II. *The voice and the breathing.*

1. The *sound of the voice* is produced by the breath

passing from the lungs through the larynx and causing a vibration of the "*vocal chords*." This vibration is communicated to the column of air enclosed in the "*vocal tube*," that is, the throat and mouth, or throat and nasal passages. In a similar way the sound of the organ-pipe is produced by the vibration of the reed acting on the column of air in the organ-pipe; and so the sound of the flute is produced by the vibration caused by the breath and acting on the column of air within the flute. The various *articulate sounds of speech* are formed by the voice being variously modified during its utterance, or obstructed or intercepted at the beginning or end of its utterance, by changes in the form of the *vocal tube*; the principal organs of speech which, by their varying relative positions, produce these changes being the *palate*, the *tongue* and the *lips*.

2. The sound of the voice may also be modified by being preceded or followed by an *unvocalized breathing*; that is, a more or less forcible expulsion of the breath while the vocal chords are not in a condition to vibrate; the breath, when not otherwise checked, striking against the sides of the throat or the palate. This sound of the *unvocalized breathing* and the *sound of the voice* are not heard together, since the one must necessarily cease when the other begins. The breathing when heard as a distinct sound becomes the *aspirate*, and is represented in the ordinary alphabet by the letter *h*.

3. Beside its use as an aspirate, however, this breath-

ing has an important influence on many of the consonant-sounds, causing, by its presence in the pronunciation of the consonant and the accompanying vowel, the difference variously designated by the words "hard and soft," "surd and sonant," "whispered and spoken," "voiceless and vocal." For instance the difference between the sound of *s* in *seal*, and that of *z* in *zeal*, is, that in the former an unvocalized breathing precedes the vowel-sound, the breathing being in this case obstructed in such a manner as to produce the sibilant or hissing sound. In the sound of the *z*, on the other hand, the vibration of the voice is immediately heard, although the breath which produces the voice is obstructed in such a manner as to produce a sibilant sound, but softer and more vocal than that of the *s*. In the same manner the sound of *s* in *hiss* differs from the *z* sound in *his*, because in the former the accompanying vowel-sound (*i*) is followed by a mere breathing which produces the sharp sibilant sound, while in the latter the voice continues to vibrate, although checked in such a manner as to produce a sibilant which is softer and more vocal than that of the *s* sound.

The same difference exists between the sounds of *p* and *b*, and also between those of *t* and *d*, *k* and *g* (as in *go*), *f* and *v*, *th* (as in *thin*) and *dh* (as in *then*). A similar distinction may also be observed between the sounds of *wh* and *w*, *yh* (as in *hew*) and *y* (as in *you*); but in the *wh* and in the *yh* the breathing is heard as a distinct aspirate or *h* sound.

4. The terms usually employed to mark this distinc-



tion are somewhat ambiguous; the words "hard and soft" being also used to denote the difference between the two sounds of *g* as in *go*, *gill*; or the two sounds of *c* as in *call*, *cell*. The words "surd," "whispered," "voiceless," seem to imply that there is an *absence of the voice*, which is not strictly true, since *all* the consonants when spoken aloud, as in ordinary language, require the aid of the voice for their pronunciation. Even in whispered language there is an imperfect vibration of the vocal chords sufficient to produce the various vowel-sounds, in connection with which the consonants are pronounced with the same differences (although less marked) as when spoken aloud. It seems that the real difference between these two kinds of consonants consists in the fact that in pronouncing the one, the *breath*, which precedes or follows the accompanying sound of the voice, is *checked* by the consonant obstruction, while in pronouncing the other it is the *voice* itself which is checked. It would be better, therefore, to denote this difference by the words *breath-check* and *voice-check*.

### § III. *Definition of Vowels and Consonants.*

1. The articulate sounds of speech are divided into two classes according as they are produced by the voice being modified *during its utterance*, or obstructed or intercepted at its *beginning or end*; the former being the *vowels*, and the latter being the *consonants*.

2. The consonants are often defined as if each had a *sound*

*of its own* independent of any accompanying vowel ; a definition which inevitably leads to confusion, and prevents the possibility of any clear distinction between vowels and consonants. It would seem to be more correct to recognize the fact that such sounds are not articulate sounds of speech unless accompanied by a vowel-sound, as the very name "consonant" implies. Even where one consonant modification immediately follows another, they both form only a modification of a preceding or following vowel-sound, when considered as parts of articulate speech. This may be illustrated by the sound of *f* in *fair*, which may be produced in an imperfect manner and even made continuous for a time without any vowel-sound ; but it constitutes by itself only a kind of *noise*, and not an articulate sound of speech. Neither is the *f* in *self* anything more than an inarticulate noise, unless considered, together with the *l*, as accompanied by, or a modification of, the preceding vowel-sound.

3. In this analysis, therefore, the consonants will be treated, not as separate sounds, but rather as modifications of a vowel-sound either at its beginning or at its end.

#### § IV. *Vowel-Sounds.*

1. The various vowel modifications are produced either by the *tongue being more or less raised towards the roof of the mouth or the palate*, or by the *lips being more or less closed or rounded together*. The vowels may, therefore, be divided into three classes, viz., *lingual vowels*, or those in

which the vowel modification is caused by the *raising of the tongue*; *open vowels*, or those pronounced while the *tongue is at rest and the lips open*; and *labial vowels*, or those in which the vowel modification is caused by the *closing or rounding of the lips*.

2. There are also certain differences in the vowel-sounds dependent upon the varying accent or stress of the voice. The accented vowels have a tendency to terminate with more or less distinctness in one of the following vowel-sounds, viz. :

- |           |    |   |
|-----------|----|---|
| (lingual) | è  | (e unaccented as in <i>enough, aid, many</i> .)             |
| (open)    | ù  | (ũ unaccented as in <i>upon, idea, other, fair, fear</i> .) |
| (labial)  | òò | (oo unaccented as in <i>how, flow, frugality</i> .)         |

Each of the long vowel-sounds hereafter described may be divided into two portions, the *initial* and the *terminal*, the former being nearly the same as the corresponding accented short vowel, and the latter being one of the three vowel-sounds above mentioned. For instance, the sound of *ā* in *age* begins like the sound of *e* in *edge*, but terminates in a slight sound of è (like *i* in *aid* or *y* in *pay*) ; the vowel-sound contained in the *ere* of *there*, or the *air* in *fair*, begins like the sound of *a* in *and* or *man*, and terminates in the sound ù (like *u* in *upon*) ; the sound of *ō* in *ode* begins like *o* in *whole*,<sup>2</sup> but terminates in the sound òò (*show*).

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<sup>2</sup> In this word and a few others, such as *home, hope, stone*, etc., the *o* "is, by many, if not by most speakers in this country, somewhat shortened." (See Worcester's Dictionary, p. xiv.) Prof. Whitney calls this shortened sound of *o* "the true short *o*," and states that in his practice "it is nearly or quite restricted to *none, whole, home, stone, smoke, folks, coat, cloak, toad, throat*."—Oriental and Linguistic Studies, Second Series, p. 216. It seems to be the only vowel in our language which can be considered as bearing the same relation to the long *o* (as in *goat, note*, etc.) which *ī* bears to *ē*, or *ō* to *ā*.

So also the sounds of *ē* in *fee*, *me*, *feed*, *heat*, *eke*, *scene*, and of *ā* in *far*, *bar*, *calm*, *farm*, and of *ōō* in *who*, *ooze*, *food*, begin with an accented sound, but terminate respectively in a slight unaccented sound of *è*, *ù*, or *òò*. The *long* vowels, in other words, receive a sort of accent and cadence, or rising and falling inflection of the voice. By the term *long* vowels I mean the *long accented* vowels, which should be distinguished from the similar vowels occurring in unaccented syllables, as for instance *e* in *enough*, *a* in *vacate*, *o* in *meadow*, etc. The latter, though sometimes called long vowels, are really short vowels, unless the voice is allowed to rest upon them with what is sometimes called the secondary accent.

3. In vowels pronounced *abruptly*, as when *closely* followed by a consonant modification or by a different vowel sound, and in vowels which are not accented at all, this double inflection does not occur, and there is a marked difference in their sound from that of the corresponding long vowels.

4. We may, therefore, after arranging the vowels according to the organs with which they are pronounced, consider each of them as having also three modes of utterance, viz. : 1—*abrupt*, when the cadence which would naturally follow the accent is cut off by an abrupt pronunciation ; 2—*grave* (or *unaccented*) when it receives no accent or stress of the voice ; 3—*long* when it receives both the stress and the cadence of the voice, or the rising and falling accent.

5. I use the word *grave* for the unaccented vowels as a convenient one for the purpose, meaning by it the *absence of accent*, or the *falling accent* generally denoted by the grave accent-mark over the letter. These vowels receiving a falling accent (or "vanishing" sound, as it is sometimes called,) cannot well be pronounced except in connection with some other accented sound; but they are otherwise the same as the *abrupt* vowels. In pronouncing each vowel with the *abrupt* utterance followed by a *grave* sound of the same vowel, it will be found that they proceed in a natural scale from the most *lingual* to the most *labial*. Each *long* vowel begins with a sound like that of the corresponding *abrupt* vowel, but with its peculiar *lingual*, *open*, or *labial* characteristic more strongly marked, and ends with a more or less distinct sound of one of the three terminal or "vanishing" vowels è, ù, or òò; and always with that one which is nearest to it in the natural scale.

6. Although the *abrupt* and *grave* vowels, when considered together, can be properly designated as the *short* vowels, since an abrupt or an unaccented pronunciation naturally produces a shorter sound, the difference between these and the *long* vowels should not be considered as consisting merely in a difference of length in the utterance. The mere prolongation of the *ī* in *īll*, or of the *ē* in *ell*, for instance, will not produce the corresponding long vowels *ē* as in *eel*, or *ā* as in *ale*. Ellis, in his "Alphabet of Nature," Part I, Chap. V, Sect. II, states that the mode in which the "short

vowels" differ from the "long vowels" is "merely in the time of utterance." I have been led, after a very careful study of the subject, to believe that the difference consists rather in a variation of accent, the long vowels requiring, as already stated, a certain inflection of the voice which causes the vowel to terminate with a different sound from that with which it commences.

Ellis argues that it cannot be a difference of accent since there are some words "in which long sounds occur in unaccented syllables," as in the words *rosetree* *magnate*, etc. But in these words if the voice *rests* on the second syllable an opportunity is given for the inflection to which I refer, just as if the second syllable was a separate word. If on the other hand the voice does not rest on the second syllable at all, the whole accent being thrown upon the first syllable, then the vowel sound is in reality a short vowel (like the *i* in *justify* or the *ay* in *Monday*, both of which Ellis calls short vowels). It is true, however, that it is not the fact of being in an accented syllable which makes a vowel long, for the abrupt vowels (called by Ellis the *stopped* vowels) are accented. But in these the natural cadence of the accent which exists in the long vowels is cut off, as it were, by the succeeding consonant modification, or by a change into a different vowel.

The following is a brief statement of the manner of formation of each vowel-sound according to the principles above stated.

LINGUAL VOWELS.

Back part of the tongue raised, the sides of the tongue being pressed against the teeth, so that the voice has only a narrow passage between the tongue and the roof of the mouth ; terminal sound è :

- Abrupt,*    ĭ    as in ĭll, pin.  
*Grave,*     ě    as in many, enough.  
*Long,*      ē    as in eel, see, he, feat, chief, people.

Tongue partly raised ; terminal sound è :

- Abrupt,*    ě    as in end, ell, ever.  
*Grave,*     à    as in Monday, about, essay, extend.  
*Long,*      ā    as in day, aid, ale, break, obey.

Tongue partly raised ; terminal sound ù :

- Abrupt,*    ă    as in at, mat, fan.  
*Grave,*     ă    as in arrange, assail.  
*Long,*      ăù   as in there, fair, prayer, air.

OPEN VOWELS.

Tongue flat or at rest and the lips open ; terminal sound ù :

- Abrupt,*    ŭ    { *guttural*    as in up, sun, son, under.  
                               { *more open* as in guy, eye, sound, how.
- Grave,*     ù    { *guttural*    as in other, fair, fear, ascertain.  
                               { *more open* as in idea, comma, algebra, upon.
- Long,*    { *ur*<sup>3</sup> *guttural,*    as in err, urge, certain.  
                  {    ă    *more open,* as in calm, far, father, alms, arms.

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<sup>3</sup>In this sound, sometimes called the *urrocal* sound, the tongue is somewhat retracted, as if about to pronounce the consonant *r* (as in furring), producing a deeper or more guttural pronunciation of the vowel.

## LABIAL VOWELS.

Lips partly closed; terminal sound ù :

*Abrupt,*    ò    as in *on, hot, pond.*

*Grave,*    ò    as in *oxalic, forever, autumnal.*

*Long,*    â(òù)    as in *for, saw, war, fall, autumn.*

Lips partly closed and somewhat rounded; terminal sound òò :

*Abrupt,*    ó    as in *home, whole, hope, stone.*<sup>4</sup>

*Grave,*    ò    as in *obey, meadow.*

*Long,*    ò    as in *go, owe, road, show, note.*

Lips nearly closed and somewhat protruded; terminal sound òò :

*Abrupt,*    òò    as in *foot, put, pull.*

*Grave,*    òò    as in *how, unto, show.*

*Long,*    òò    as in *food, who, ooze.*

§ V. *Compound Vowels.*

There are certain combinations of the vowels described in the preceding section, which are pronounced as if forming but one syllable, and may be called *Compound Vowels*.

## COMPOUND VOWELS.

Final è		Final òò	Final òò
î (üè)	òè	üòò	û (yòò, èòò)
<i>eye</i>	<i>oil</i>	<i>owl</i>	<i>few</i>
<i>fly</i>	<i>boy</i>	<i>how</i>	<i>cube</i>
<i>fine</i>	<i>toil</i>	<i>found</i>	<i>assume</i>

<sup>4</sup> See above, § IV, note 2.



Final ù				
ēù	āù	īù	ōù	ōōù
<i>ear</i>	<i>player</i>	<i>ire</i>	<i>more</i>	<i>poor</i>
<i>fear</i>	<i>weigher</i>	<i>fire</i>	<i>door</i>	<i>your</i>
<i>mere</i>	<i>slayer</i>	<i>wire</i>	<i>oar</i>	<i>boor</i>

### § VI. *Obscure Vowel Sounds.*

In unaccented syllables the vowel-sound is often slight and obscure, as in *legacy*, *political*, *philosophy*, *volatile*, *colony*. These obscure vowels may generally be omitted in short-hand writing. In any case where it is desirable to represent such a sound the short-hand character for the *open* vowel ù may be used.

In the last syllable of such words as *evil*, *able*, *reckon*, *wooden*, *often*, *oven*, etc., the voice passes directly from one consonant modification to another without any distinct intermediate vowel; the final consonant modification being of such a nature, however, as to admit vocal sound sufficient to form a separate syllable without the aid of any final vowel-sound. In such words as *robbed*, *realm*, *helve*, *adze*, the voice passes in like manner from one consonant modification to another, and the final consonant modification admits a slight sound of the voice, but not sufficient to form a separate syllable.

In all such words the slight vocal sound referred to, even if it seems to be a vowel-sound, does not need to be represented in writing, as the representation of the two successive consonants will sufficiently indicate the sound.

§ VII. *Consonant Sounds.*

The *consonants* are those modifications of the voice by which it is *obstructed or intercepted at the beginning or end* of its utterance, and are produced by the organs of speech being *more or less closed together*. They are divided here into three classes, viz. : *labial*, when the obstruction is caused by one or both of the lips ; *lingual*, when it is caused by the tongue ; *palatal*, when it is caused by the back part of the tongue and the palate.

Some of the consonants resemble each other in the position which the organs of speech assume for their pronunciation, but have a certain difference of sound dependent upon the presence or absence of a slight unvocalized breathing between the consonant and its accompanying vowel. Where this breathing is present the consonant forms an obstruction to the *breath* ; where it is not present the obstruction acts directly upon the *voice*. This difference I shall indicate by using the words *breath-check* and *voice-check*. (See above Ch. 1, § II.)

Another difference is produced by causing the voice to sound or vibrate through the nasal passages, rather than through the mouth. This may be denoted by the word *nasal*.

## LABIAL CONSONANTS.

Both lips closed together :

<i>Breath-check,</i>	p	as in <i>purr, pin, up, apt, upper, park.</i>
<i>Voice-check,</i>	b	as in <i>burr, bin, rob, robbed, robber, bark.</i>
<i>Nasal,</i>	m	as in <i>murmur, some, named, hammer, mark.</i>

Both lips nearly closed together and slightly more compressed than when about to pronounce the vowel *ōō* :

*w* as in *were, went, witch, away, war, woo.*

Lower lip closed against the edge of the upper teeth, but allowing a slight passage of the breath or voice :

*Breath-check,*    *f*    as in *fur, if, for, fine, phase.*

*Voice-check,*    *v*    as in *vernal, of, over, vane, vast.*

#### LINGUAL CONSONANTS.

Tongue closed against the inside of the upper teeth, or against the gums of the upper teeth :

*Breath-check,*    *t*    as in *turn, it, to, utter, wait.*

*Voice-check,*    *d*    as in *dirk, add, do, adder, wade.*

*Nasal,*            *n*    as in *nerve, an, no, inner, wane.*

Tongue raised towards the roof of the mouth somewhat more than when about to pronounce the vowel *ē* :

*y*    as in *yearn, you, yard, ye, beyond.*

Tongue closed against the edge of the upper teeth, but allowing a slight passage of the breath or voice :

*Breath-check,*    *th*    as in *third, thin, earth, breath.*

*Voice-check,*    *dh*<sup>5</sup>    as in *other, then, thine, breathe.*

Tongue closed as in the pronunciation of *t*, but allowing the breath or the voice to be forced through between the tip

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<sup>5</sup> This digraph is adopted as being the method generally used to distinguish this sound from that of *th* in *thin*.

or upper front part of the tongue and the hard palate (or the gums of the upper teeth) producing a hissing or sibilant sound :

*Breath-check,*    *s*    as in *racer, certain, soon, ice, hiss, bits.*

*Voice-check,*    *z*    as in *razor, zeal, ooze, eyes, his, adze.*

Tip of the tongue closed against the upper teeth, or upper part of the mouth, the sides of the tongue being left free :

*l*    as in *learn, color, ill, lose, play, blue.*

Tip of the tongue reversed, or retracted, and raised towards the roof of the mouth, the passage by it of the breath or voice producing more or less of a vibrating or trilling sound :

*r*    as in *error, ray, ring, rustle, tray, dray, fray.*

#### PALATAL CONSONANTS.

Back part of the tongue closed against the roof of the mouth or soft palate :

*Breath-check,*    *k*    as in *kernel, oak, cup, seek, acre.*

*Voice-check,*    *g*    as in *gird, ague, gun, league, auger.*

*Nasal,*            *ng*<sup>6</sup>    as in *singer, hang, ring, long.*

Breath striking upon, or vibrating against, the soft palate, sides of the throat, or back part of the mouth :

*h*    as in *her, hand, who, haste, hard.*

[The above arrangement of the consonants corresponds substantially with that of Bishop Wilkins (See Part I, p. 40). I prefer, however, to consider *w* (as in *we, woo, away*), *y* (as in *ye, you, beyond*) and *h* as consonants; and *sh* (as in *sheer*) and *zh* (as in *azure*) as compound sounds.]

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<sup>6</sup> The *ng* is italicized to distinguish this sound from that of *ng* in *anger, linger*, etc. The sound has really no connection with that of *n*, except that it is the *nasal palatal* as *n* is the *nasal lingual*.

§ VIII. *Compound Consonants.*

There are certain combinations of consonant modifications which may be pronounced with one utterance of the voice, so as to seem like single consonant-sounds. These may be called *compound consonants*.

W AND Y COMPOUNDS.

wh	yh <sup>7</sup>	ch( <i>tyh</i> )	j( <i>dy</i> )	sh( <i>syh</i> )	zy
when	hew	chew	Jew	shoe	azure
awhile	human	watch	edge	ocean	pleasure
	kw	gw	sw		
	queen	guava	sweet		
	banquet	language	assuage		

NASAL COMPOUNDS.

mp	mb	nt	nd	ngk	ngg
empire	amber	enter	under	anchor	anger
stamp	rhom <b>b</b>	ant	and	ink	linger

FINAL L COMPOUNDS.

pl	bl	fl	kl	gl
play	blow	flow	clay	glow

FINAL R COMPOUNDS.

pr	br	fr	tr	dr	kr	gr
pray	bray	fray	tray	dray	crow	grow

<sup>7</sup> The *wh* and *yh* sounds are here considered as combinations in the same utterance of the consonant sounds of *w* and *y* with the aspirate *h*, rather than breath-check consonants corresponding to *w* and *y* as *p* corresponds to *b*, for the following reason: In the pronunciation of these sounds, *wh* and *yh*, the breath is not so much checked as to prevent a distinct aspirate or *h* sound; while in those consonants, like *p*, *t*, etc., which I have denoted by the name *breath-check*, the complete or almost complete, closure of the organs of speech prevents any distinct pronunciation of the aspirate *h*, the breath being heard only in an explosive or forced utterance. The difference between the sound of *w* in *kw* and *gw* corresponds perhaps more nearly with that between the *breath-check* and *voice-check* consonants.

§ IX. *Explanation of the compound consonants ch, j, sh, zy, ngk and ngg.*

ch (*tyh*). The sound of ch (*tyh*) (as in *chew, cheer, watch*, etc.,) is considered here as being a combination of *t* and *yh*, the tongue being first placed in position to pronounce *t*, and then the tip lowered sufficiently to pronounce *yh* (as in *hew*); the breath, which had been checked by the *t*, causing a slightly explosive sound.

j (*dy*). The sound j (*dy*) (as in *Jew, jeer, edge*, etc.,) is in a similar manner a combination of *d* and *y*, the voice being checked instead of the breath.

sh (*syh*). The sound of sh (*syh*) (as in *shoe, ash, sure*) is a combination of *s* and *yh*, the tongue being in position to pronounce *s*, but with the tip or front part lowered sufficiently to pronounce *yh* (as in *hew*); the pronunciation of both together modifying to a certain extent the sibilant sound and rendering it more aspirate.

zy. The sound zy (as in *azure*) is a combination of *z* and *y*, the voice being checked instead of the breath.

ngk, ngg. The sounds, ngk (as in *ink*) and ngg (as in *anger*) are combinations of *ng* (as in *singer*) with *k* and with *g*. The nasal palatal *ng* is followed by a closing of the nasal passages, thus checking the nasal sound, and producing the final *k*, or *g*, according as the *ng* is followed by the breathing or by a continued vocal sound.

§ X. *Example of Phonetic Spelling.*

To illustrate the phonetic method of writing I have taken a few sentences from the very valuable and interesting treatise of Prof. Whitney (Oriental and Linguistic Studies, Second Series, p. 202), and have represented them according to the spelling of the foregoing analysis. The passage selected answers a double purpose, furnishing the subject for the example, and also stating in a clear and concise manner a truth of great importance in the study of phonetics.

The unaccented sounds of short *a*, as in *attempt*, *utterance*, and short *o*, as in *forever*, *occur*, are distinguished from the corresponding accented sounds by using the unmarked letters *a* and *o*. The unaccented sound of short *e*, as in *existence*, *engage*, is represented by *à*. The two unaccented open vowels, which are both represented by *ù* in the analysis, are here distinguished by using *á* for the more open sound (as *a* in *idea*, *artistic*), and *ù* for the guttural sound (as *e* in *other*, *a* in *fear*, or *i* in *fair*). The vowels in the words *a*, *an*, *to*, *the*, *be*, and *of*, are considered as unaccented sounds.

"It iz à fákt wél nòn tòò dhè stöödànts ov lānggwāj dhāt nō livēng tūng iz spōkn in an àntiūrle akkōrdant mǎnnūr bī dhè hòl bōdè ov dhōz tòò hòòm it iz nātēv. Diffūrànsēz ov ùttúrans (álōng widh diffūrànsēz ov frāzēölòjē ànd sēgnèfèkāshùn) sūmtimz rīz tòò sūch à dēgrē iz tòò prò-dūs strōnglè dēfīnd diálàkts, dhè spēkūrz ov whīch kǎn hārdlè, if át ál, ùndǔrstānd wūn anūdhūr. Dhè āgzistāns ov sūch "dēlākts," álōngsid dhè apprōōvd spēch ov dhè kùltēvātād, iz āz jēnērāl āz dhè āgzistāns ov à kùltēvātād spēch. Būt ēvn in dhè ùttúrans ov dhè lātūr dhè sām dēskōrdansēz okkur; òn à smállūr skāl, èndēd, yēt mǎrkt ènūf tòò allōò dhè vārēus lòkālètè ov diffūrànt wél-ēdükātād spēkūrz tòò bē dētēktād bī wūn hòò hāz dhè rēkwēzet kwīknās ov ēūr, ànd à sūffī-shāntlè wid ākspērēāns. . . . . Evn ēdükātād ùzēj hāz nēvār bīn mād prēsīsèlè akkōrdant, dūòòn tòò dhè lāst pǎrtikūlār; ànd if it wur wūns bī à mirākl mād sō, it kōòd nōt bē kēpt sō; dhè lāps ov à surtān tīm wōòd shō dhè òld stāt ov thīngz brāt bǎk āgēn."

TABLE I. VOWEL CHARACTERS.

LINGUAL.			LABIAL.			
Written downward,			upward.			
SHORT	OPEN.			forward,		
	forward,			backward,		
	forward,			backward,		
	backward,			forward,		
LONG	OPEN.			forward,		
	forward,			backward,		
	forward,			backward,		
	backward,			forward,		

[In pronouncing the *short* vowels successively it will be noticed that they have a natural sequence from the most *lingual*, to the most *labial*. This will render it easy to commit them to memory in that order. The characters have a corresponding sequence in the order of their direction from downward to upward. As it is not necessary in short-hand writing to distinguish the *abrupt* vowels from the corresponding *grave* (or *unaccented*) vowels, they are represented by the same characters. The corresponding *long* vowels are represented by the same characters made longer.

The vowel-characters differ only in *direction* or *length*. The *thickness* or *heaviness* of *stroke* is immaterial as it is not made use of in this system as a means of distinguishing sounds.]

\* See above, Chap. I, § IV, note 2.



TABLE II. CONSONANT CHARACTERS.

	CLOSE.		OPEN.		DENTAL.		SIBILANT.		TRILLED.	
	{		{		{		{		{	
	⌒	⌒	^	⌒	⌒	⌒				
	p	b	w	f	v	s	z	l	r	
	pert	bird	were	first	verse	discern	learn	tiller	run	
	upper	rubber	work	offer	ever	razor	error			
	{		{		{		{		{	
	⌒	⌒	∨	⌒	⌒	⌒	o	o	∨	∨
	t	d	y	th	dh	s	z	l	r	
	turn	dirk	young	third	thus	sir	discern	learn	run	
	utter	adder	yearn	ether	other	racer	razor	tiller	error	
	{		{		{		{		{	
	c	c	<	<	<	<				
	k	g	ng	h	h	h				
	kirk	gust	sing	her	her	her				
	acre	auger	singer	hand	hand	hand				

[The labial characters begin with an upward movement; the corresponding lingual characters, that is, those for the close, open and dental linguals, begin with a downward movement; and the palatal characters with a backward movement from the top.]

TABLE III. COMPOUND VOWEL CHARACTERS.

┘	┘	┘	∨
ī (ūè)	ōè	ūòò	ū (yōō or èōō)
ice	oil	owl	use
fly	toy	sound	cube
high	boil	plow	few

┘	┘	┘	┘	┘
ēù	āù	īù	ōù	ōōù
ear	player	ire	oar	poor
mere	weigher	fire	door	moor
tier	guyer	higher	more	boor

TABLE IV. COMPOUND CONSONANT CHARACTERS.

*w and y Compounds.*

^	∨	∨	∨
wh	yh	ch(tyh)	j(dy)
why	hew	cheer	jeer

⌒	⌒	⌒	⌒	⌒
sh(syh)	zy	kw	gw	sw
sheer	azure	queen	language	sweet

*Nasal Compounds.*

∪	∪	∪	∪	∪	∪
mp	mb	nt	nd	ngk	ngg
stamp	amber	ant	and	ink	anger

*Final l Compounds.*

┘	┘	┘	┘	┘
pl	bl	fl	kl	gl
play	blow	fly	clay	glow

*Final r Compounds.*

┘	┘	┘	┘	┘	┘	┘
pr	br	fr	tr	dr	kr	gr
pry	brow	free	try	dry	cry	grow

## CHAPTER II.

### DIRECTIONS FOR THE USE OF THE CHARACTERS.

§ I. *The characters differ in direction or form, but not in thickness.*

IN constructing this system of short-hand I have wholly avoided the use of a difference in *thickness* or *heaviness* of stroke as a means of denoting a difference in sound, believing such an expedient objectionable for two reasons, viz. ; first, the uncertainty which it is apt to impart to the reading of the short-hand manuscript; and second, the interruption it necessarily occasions in writing, thereby preventing the acquirement of an easy running hand. All the characters are to be written with a light and flowing stroke, so as to give the greatest facility to the movement of the hand.

§ II. *Joining the characters to form words.*

IN this system all the characters of any short-hand word are to be joined together so as to form one continuous stroke or movement of the pen,—the second character beginning where the first ends, the third where the second ends, and so on without lifting the pen till the word is finished; somewhat as the word *vowel* is written in long-hand manuscript. No detached marks are used either for vowels or consonants; and the only exception to the continuity of the

writing for all words (other than those for which word-signs or abbreviation-marks are used) is, that when two vowel-characters come together having the same direction they should be written parallel to each other rather than joined.

The student, before attempting to write words, should practise writing the characters separately in order to become familiar with their forms and to accustom the hand to the movements which they require.

### § III. *Vowel Characters.*

1. The vowel characters are straight or curved strokes following in the order of their direction the natural scale of the vowel-sounds; viz., *downward* for the *most lingual*; *slanting downward* for the *partly lingual*; *horizontal from left to right* for the *open vowels*; *slanting upward* for the *partly labial*; and *upward* for the *most labial*.

2. No distinction need be made in short-hand writing between the vowels which have an *unaccented* pronunciation and the corresponding vowels which have an *abrupt* pronunciation. Both kinds are therefore arranged together in the Table of Vowel Characters under the name of *short vowels*, and are represented by the same series of characters.

3. The characters for the *long* vowels differ only in *length* from those for the corresponding short vowels.

4. In rapid writing the downward stroke  $\searrow$  may be used for  $\text{ä}$ , instead of the downward curve  $\curvearrowright$ , and the upward stroke  $\nearrow$  for  $\text{ö}$  instead of the upward curve  $\curvearrowleft$ .

5. The upward stroke  $\nearrow$  may be used for  $\dot{a}$  except for such final sounds as *or* in *for*, *ar* in *war*, *aw* in *saw*, which should be represented by the curved form  $\frown$

6. The vowel-sound  $\dot{u}$  in *fear*, *fair*, *there*, *other*, is very nearly the same as the final sound in *idea*, and these sounds do not need to be distinguished from each other in writing. The corresponding *long* vowels *ur*, as in *urgent*, *earnest*, and  $\ddot{u}$ , as in *alms*, *harm*, *father*, also resemble each other, being both *open* vowels, and may generally be represented by the same character. If greater accuracy is desired, the *ur* vowel may be represented by adding the character for *r*, thus  $\text{—} \text{r}$  in the same manner as is done in ordinary writing in such words as *urgent*, *lurk*, *fur*.

7. The characters for the *compound vowels* are formed by joining the characters for the vowels which compose them; the angle in some cases being rounded into a curve form for convenience of writing.

Any other combinations of vowels may be represented in a similar manner by combining the vowel-characters as in the following examples :

$\text{L}$   
èù  
area  
heavier  
studious

$\vee$   
èö  
mediocrity  
physiology  
geology

$\checkmark$   
èò or iò  
oriole  
diocese  
violate

"  
iè  
piety  
society  
variety






$\nearrow$   
öè  
showy  
poetry  
stoical

$\text{—}$   
üòòü  
poucer  
shower  
dower

8. The *consonant* sound of *r* final or before a consonant, as in *fear*, *pour*, *art*, *court*, etc., need not be represented. When *r* comes between two vowel-sounds, we may either omit the vowels and write the *r*, or we may omit the *r* and write the vowels. In the latter case if the vowel-characters have the same direction they should be written parallel to each other rather than joined together.

9. Any termination consisting of *rè* preceded by an unaccented vowel or by *ě*, as in *salutary*, *livery*, *history*, *ivory*, *very*, *merry*, etc., may be represented by a combination of the two characters \ and | viz. \ ; and the same mark made larger may represent *ārè* as in *vary*, *dairy*, etc.

Other terminations in *rè* preceded by one or more vowels may be represented as follows :

				
ūrè	ōrè or ōrè	iūrè	ǎūrè or ārè	ũòòūrè
<i>hurry</i>	<i>story</i>	<i>fiery</i>	<i>fairy</i>	<i>flowery</i>
<i>curry</i>	<i>glory</i>	<i>wiry</i>	<i>airy</i>	<i>showery</i>
<i>worry</i>	<i>quarry</i>	<i>miry</i>	<i>carry</i>	<i>bowery</i>

When these or similar combinations of sounds occur in the middle of a word, as in *stereotype*, *interest*, *hurried*, *florid*, *fairylike*, *prevaricate*, etc., the same forms may be used ; or the character for *r* may be used, the vowels being omitted.

§ IV. *Consonant Characters.*

1. The student should learn to repeat readily the consonant-sounds in their natural order as arranged in Table II. In doing this he should not use the alphabetical "names" of the letters, as some of them have the accompanying vowel before, and some after, the consonant; and those for *w*, *y*, *r*, *g*, and *h* are entirely different in sound from the consonants themselves. Just enough vowel-sound should be used to give each consonant its distinct pronunciation, and to enable them all to be easily uttered in succession. For this purpose the *open* vowel *ur* as in *fur* is the most convenient, and may be used after each consonant, thus, for *labials*:—*pur*, *bur*, *mur*, *wur*, *fur*, *zur*; for *linguals*:—*tur*, *dur*, *nur*, *yur*, *thur*, *dhur*,<sup>1</sup> *sur*, *zur*, *lur*, *rur*; for *palatals*:—*kur*, *gur*, *ngur*,<sup>2</sup> *hur*.

2. The *consonant-sounds* having thus been committed to memory in a natural order, the *consonant-characters* may be easily memorized. The characters for the labials, *p*, *m*, *w*, and *f*, have a resemblance to certain portions of the ordinary manuscript letters, which will enable the student to associate in his mind the *character* with the corresponding *letter*; and from these *labial* characters all the others, except those for *s*, *z*, *l*, and *r*, are derived.

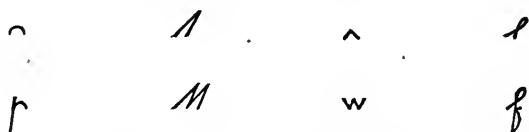
3. The character which represents the sound of *p*, for

---

<sup>1</sup> As in *other*.

<sup>2</sup> As in *singer*.

instance, may be compared to the last portion of the manuscript letter *p*; that for *m* resembles the first half of the capital letter *M*; that for *w*, the middle portion of the letter *w*; and that for *f*, the upper loop of the letter *f*.



4. The characters for the *voice-check* consonants, *b* and *v*, are the same as those for the corresponding *breath-check* consonants, *p* and *f*, only they are made larger.

5. The characters for the *linguals*, *t*, *d*, *n*, *y*, *th*, and *dh*, are the same as those for the corresponding *labials*, only they are written *downward* instead of *upward*.



6. The characters for the *palatals*, *k*, *g*, *ng*, and *h*, are the same as those for the corresponding *linguals* and *labials*, only they are written *backward* (beginning at the top).



7. The characters for *s* and *z* are *circles*, that for *z* being made larger than that for *s*.

8. The characters for *l* and *r* are horizontal lines preceded by a *short backward stroke*, that for *l* being *upward* and that for *r* *downward*.





§ V. *Compound Consonant Characters.*

1. The *compound-consonants* are represented by forms derived from the characters which represent the component sounds.

2. The character for *ch* (*tyh*) is derived from the downward curve which represents *t* and the downward angle which represents *yh*, the character for *j* (*dy*) being the same only larger; that for *sh* (*syh*) is derived from the *s* circle and the *yh* angle; that for *kw* is the *w* character written in a curve form to represent the curve of the *k* character.

3. In the characters for *mp* and *nt* the *m* and *n* angles are rounded to represent the *p* and *t* curves.

4. The characters for *ngk* and *ngg* have a downward stroke for the *ng* sound with an upward curve stroke which returns to the line of writing and answers to represent the curve form of the *k* and *g* characters.

5. It is seldom necessary to distinguish between the sounds *ng* as in *singer* and *ngg* as in *linger*, and they may generally both be represented by the character for *ngg* ✓

6. In the characters for *pl*, *bl*, and for *kl*, *gl*, the *p* and *b* curves and the *k* and *g* curves are turned so as to end with the *l* character. In a similar manner the characters for the final *r* compounds end with the *r* character. The characters for *fl* and *vl* consist of the characters for *f* and *v* written so as to slant backward instead of forward in order to represent the backward stroke of the *l* character.

7. The characters for *wh* and *yh* are the same as those for *w* and *y*, there being, usually, no need of distinguishing them in short-hand writing. If greater accuracy should be desired the *wh* may be represented by a combination of the *w* and *h* characters, and the *yh* by a combination of the *y* and *h* characters, thus,

↖      ↘

### § VI. *Double Consonant Forms.*

When two or more consonant-sounds occur together in a word, either in the same syllable or in successive syllables, without any intervening vowel-sound they may be written together in a more or less abbreviated form as represented in Table V on pages 90 and 91. The forms for the *compound* consonants already given in Table IV are omitted.

### § VII. *Directions for the use of the characters for m, n, f, v, th, dh, w, y, wh, yh, and h.*













1. The *first* or *upward* stroke of the *m* character is intended only as a connecting stroke, in order to bring the character *above* the line of writing of the rest of the word. When this character *begins* a word, or is only preceded by a character which may be conveniently written above the line of writing, the connecting stroke may be dispensed with.

2. The *second* or *upward* stroke of the *n* character is also only a connecting stroke which may be dispensed with when this character *ends* a word or is only followed by a character which may be written below the line of writing.

mask	immerse	smoke	burn	attorney	turns

3. When the slanting characters, m, n, f, v, th, or dh, are either of them preceded or followed by the *labial* vowel ōō the character may be written directly upward or downward instead of slanting; and in this case the vowel itself may often be omitted, being sufficiently indicated by the direction of the consonant-character.

4. As the consonants w, y, wh, and yh naturally imply a following vowel-sound we may use the consonant character alone, omitting the vowel-character, or we may use a combination of both, as in the following examples :

					
wē <i>weave</i> <i>wheel</i>	wā <i>wake</i> <i>wait</i>	wău <i>wear</i> <i>where</i>	wur <i>world</i> <i>whirl</i>	wō <i>woe</i> <i>wove</i>	wōō <i>woo</i> <i>woof</i>
					
yē <i>ye</i> <i>yield</i>	yā <i>yea</i>	yû <i>saviour</i> <i>behavior</i>	yur or yā <i>yearn</i> <i>yard</i>	yō <i>yoke</i>	yōō <i>view</i> <i>heav</i>

5. The character for w or wh when it is followed by a character which slants downward to the left may be written in a curved manner forming a small hook at the beginning of the succeeding character.

6. The character for the aspirate h may be written alone, the vowel following being omitted, or the vowel may be written and the aspirate character omitted. If both are written they may be combined in the following manner :
































					
hē <i>heed</i>	hā <i>hate</i>	hur or hă <i>hurt, harm</i>	hō or hâ <i>hot, hall</i>	hō <i>hole</i>	hōō or hōō <i>hood, hoot</i>

TABLE V. CONSONANT CHARACTERS JOINED IN ONE FORM.
















*Initial l.*

									
lp	lb	lm	lf	lv	lt	ld	lth	lch	lj
help	bulb	realm	elf	helve	hilt	held	health	filch	bulge
									
ls	lz	lsh	lk	ltr	ldr				
else	bells	compulsion	silk	ultra	children				








*Initial m.*

								
mt	md	mn	mz	ml	mpl	mb	mpr	mbr
empty	aimed	chimney	alms	hamlet	ample	amble	empress	embrace








*Initial n.*

					
nm	ns or nz	nl	nr	nst	nzd
enmity	pence pens	enlarge	enrage	against	bronzed
					
ntr	ndr	nstr	nkr	ntl	ndl
entry	hundred	instruct	increase	antler	handle
					
nk	nch	nj			
inquest	bench	enjoy			








*Initial ng.*

						
ngt	ngd	nyth	nggr	nggw	ngkl	nggl
distinct	wronged	length	angry	language	ankle	angle





*Final l.*

						
tl	dl	sl	spl	kspl	kskl	thl
rattle	addle	slay	split	explain	exclude	athlete

*Final r.*

						
spr	kspr	str	kstr	ktr	skr	thr
spread	express	string	extreme	doctrine	scream	throne

*Final t.*

			
pt	ft	st	kt
apt	oft	llst	liked

*Final d.*

			
bd	vd	zd	gd
robbed	moved	raised	rigged

## CHAPTER III.

### DIRECTIONS FOR WRITING.

#### § I. *The line of writing.*

THE *line of writing* is the horizontal line on which words are written. In short-hand writing, if ruled paper is used, the line of writing should be an imaginary line *in the middle of the space*, the ruled lines themselves being used only to separate the written lines from each other; for the reason that if the words were written *on* the ruled line the horizontal characters might not be sufficiently distinct from it. The student should first practise with ruled paper, learning to write the words in the middle of the space between the ruled lines. After the method of writing has become familiar it will be better to dispense with ruled lines altogether, as it is an advantage not to be dependent upon them.

#### § II. *Size of the characters.*

The characters as exhibited in the tables, though somewhat larger than they need to be in practical use, will serve to show the proper form, direction, and relative size or length. No use is made of a difference in thickness or heaviness of stroke as a means of denoting a difference between sounds. (See Chapter II, § I.) The beginner will naturally use at first a larger sized writing than will be necessary after

the hand has become more accustomed to forming the characters. The best measure for practical use is about an eighth or a sixth of an inch in length for the largest sized characters.

Although it is best to form the habit of making the distinction between the small and large characters, there are some of them, as those for *f* and *v*, for *s* and *z*, and for *th* and *dh*, in which, as experience will show, this distinction need not always be observed in rapid writing. The same is true in regard to the distinction between the *short* vowels and the corresponding *long* vowels; which is denoted by a difference in the *length* of the character, and is not so important as those distinctions which are denoted by a difference in *form* or *direction*. An occasional omission to give the exact size or length to the character will not occasion any difficulty in the reading, since the rest of the word or the accompanying words will sufficiently show what sound it is intended to represent.

### § III. *Continuity of the writing.*

As already stated, Chap. II, § II, the writing of each word is to be continuous; the only exceptions being the word-signs and marks for abbreviation, and the words in which two vowel-characters having the same direction are written parallel to each other.

In joining the characters of a word the forms may often be slightly varied for convenience of writing; but this should

be done only when it will not interfere with the legibility of the manuscript.

§ IV. *Words to be written according to the sound.*

In writing a word in phonetic short-hand no regard should be paid to the ordinary spelling, and those sounds only should be represented which are heard when the word is pronounced. All silent letters are to be omitted; for instance, such as *e* in *finè*; *i* in *chief*; *w* in *writ*, *wrong*; *p* in *attempt*; *k*, *w*, *d* and *e* in *knowledge*; *p* and *l* in *psalm*, etc. The student must also learn not to be misled by the unphonetic manner in which the letters are used in the ordinary long-hand writing; as for instance in the words *weighty*, *phase*, which, written phonetically, would be *wātè*, *fāz*.

The habit of spelling in the ordinary way makes it somewhat difficult, at first, to learn to write phonetically, that is, according to the sound; and for this reason it will be well for the student to make a careful study of the analysis of sounds given in Chapter I, before proceeding to practise the short-hand writing.

§ V. *Sounds that may be omitted in writing.*

As rapidity is the chief object of short-hand, many sounds, particularly vowel-sounds, may be omitted in the writing where such omission does not prevent the written word from being easily read; the other sounds in the same word or the other words with which it is connected making it sufficiently evident what word is intended to be represented. To what



extent this omission may be carried will depend upon practice and also upon the particular object of the writing. As the short-hand writing becomes familiar a word will be read, not by spelling out each character, but by its general form or outline ; so that a whole sentence may often be read at a glance even though considerably abbreviated by the omission of many of the sounds. If the writing is intended to be laid aside and not to be read till after an interval of time, the writing should be more full and accurate than when it is intended for immediate use.

Although practice is the best teacher in regard to this sort of abbreviation it will be found convenient to observe the following rules :

1. *Unaccented vowels between consonants* (in the same word) may generally be omitted. Even accented vowels between consonants may often be omitted, especially in words of more than two syllables.

2. The *r* before a consonant, as in art, heart, court, etc., or when *final*, as in war, fear, fair, etc., need not be represented.

3. The sound of *r* between two vowel-sounds, as in serious, arrange, etc., may generally be omitted if the vowel-sounds are represented.

4. When the same consonant is repeated without any intervening sound as in better, dagger, inner, etc., only one need be written.

5. The aspirate *h* may be omitted if the vowel which follows it is represented; except in a few words (particularly those of one syllable) where the aspirate constitutes the only means of distinction from another word, as in *harm*, *arm*; *heart*, *art*; *hold*, *old*.

6. When *m*, *n*, *l*, *r*, begin a word, the vowel following may often be omitted even when accented, as these consonants, when *initial*, imply a following vowel.

7. An initial vowel need not be represented when it is followed by a double consonant-sound which necessarily implies a preceding vowel-sound, as in *employ*, *empire*, *express*, *intend*, *altitude*, etc.

## CHAPTER IV.

### WORD-SIGNS AND ABBREVIATIONS.

#### § I. *Definition of word-signs.*

WORD-SIGNS are special signs representing certain words, and may consist either of *contractions*; words in which some of the characters are omitted or written in a contracted form; or *symbols* suggesting by their forms the idea of the word; or, finally, *arbitrary marks*. Those of the first kind are naturally suggested by experience, and their use may be indefinitely extended by the writer to suit his own convenience, provided only that the forms be such as will not interfere with the legibility of the writing. (See pages 114, 115.) Symbols may be used for a few common words denoting position or direction. Examples of this kind will be found on page 104. Arbitrary marks can be more easily committed to memory if the words and their signs are arranged in a certain corresponding order. Some of the pronouns and auxiliary verbs are represented by such marks.

#### § II. *Use of word-signs.*

For those who wish to acquire a knowledge of short-hand, not for the most rapid kind of *verbatim* reporting, but for the ordinary purposes of correspondence, composition, taking notes of lectures, etc., it is best not to burden the memory

with too many rules or arbitrary signs. The advantage to be gained, however, by the use of a few word-signs for the most common words, and certain methods of abbreviation for prefixes and terminations, will amply repay one for the little exertion necessary to commit them to memory ; and these can be learned more easily at first than after acquiring a habit of writing out, in full, words which might as well be represented by brief forms.

### § III. *Difference of position.*

Many words and phrases may be represented by the use of word-signs, the meanings of which vary according as they are written *above*, *on*, or *below* the line of writing. For example, the characters for *p*, *t*, *k*, and a curve having a direction opposite to that for *k* furnish convenient word-signs as indicated in the following table : each character having a different meaning according to its position ; that for *t*, for instance, meaning *at least* when written *above* the line, *at any rate* when written *on* the line, and *at all events* when written *below* the line.

$\smile$ $\left\{ \begin{array}{l} \text{at least} \\ \text{at any rate} \\ \text{at all events} \end{array} \right.$	$\frown$ $\left\{ \begin{array}{l} \text{possibly} \\ \text{perhaps} \\ \text{probably} \end{array} \right.$
$\complement$ $\left\{ \begin{array}{l} \text{according to} \\ \text{on account of} \\ \text{in consequence of} \end{array} \right.$	$\supset$ $\left\{ \begin{array}{l} \text{on the contrary} \\ \text{nevertheless} \\ \text{notwithstanding} \end{array} \right.$

### § IV. *Word-signs for Pronouns.*

1. The *personal pronouns* are represented by the use of the *dot* written either *above*, *on*, or *below* the line of writing,

according as the pronoun is of the *first*, *second*, or *third* person; *two dots* being used for the *plural* number.

*I or me    you    he, him, or it    we or us    ye    they or them*

2. Other pronouns may be represented by small angles written above, on, or below the line of writing.

^		^		v		•		v		•
who or whom		which		what		each		each other		every or everybody

$>$                        $>$                        $<$                        $<$                        $<$   
*either*            *any or anyone*            *such*            *neither*            *none*            *another*

3. The possessive case may be indicated by a curved line *under* the word-sign, and the reciprocals *self*, *selves*, the termination *ever*, and the adjective *own* may, either of them, be indicated by a curved line *over* the word-sign. These curves may be used together forming a circle about the word-sign for *my own*, *their own*, etc.

### EXAMPLES.

			
<i>my or mine</i>	<i>your or yours</i>	<i>themselves</i>	<i>whatever</i>

4. Other pronominal words may be represented as follows :

<i>a</i>	<i>an</i>	<i>the</i>	<i>this</i>	<i>these</i>	<i>those</i>	<i>there</i>	<i>then</i>
<i>both</i>	<i>few</i>	<i>many</i>	<i>some</i>	<i>the same</i>	<i>part</i>	<i>whole</i>	

5. Time, place or manner may be denoted by the marks or (*t*, *p*, *m*,) written under either of the above word-signs or abbreviations.

#### EXAMPLES.

<i>at</i>	<i>at</i>	<i>in</i>	<i>at</i>	<i>at</i>	<i>at</i>	<i>part</i>	<i>at the</i>
<i>which</i>	<i>what</i>	<i>any</i>	<i>every</i>	<i>this</i>	<i>some</i>	<i>of the</i>	<i>same</i>
<i>time</i>	<i>place</i>	<i>manner</i>	<i>place</i>	<i>time</i>	<i>time</i>	<i>time</i>	<i>place</i>

6. Other similar abbreviations will be suggested by experience. For instance, the expression *on my behalf*, *on his behalf*, etc., may be represented by placing the character for *b* above the word-sign; *for this reason*, *for another reason*, etc., by placing the character for *r* above the word-sign; and *for this purpose*, *for what purpose*, etc., by placing the character for *p* above the word-sign. The addition of the word *thing*, as in *everything*, *something*, may be denoted by making a straight stroke through the word-sign.

§ V. *Word-signs for the auxiliary verbs.*

1. For the words *may, can, will, shall, must, ought to, have, had, might, could, would, should*, a short stroke may be used, written in one of four directions, and *above* the line for the first four, *on* the line for the second four, and *below* the line for the last four.

—    /    \    /    —    |    \    /    —    |    \    /  
 may   can   will   shall   must   ought to   have   had   might   could   would   should

2. The addition of *not* may be indicated by an additional stroke making an acute angle with the first; and *be* or *been* by a parallel stroke, as in the following examples :

>    >    >    \    /    V    V    V  
 may not   must not   might not   have not   had not   can not   ought not to   could not

=    ||    =    ||    =    \ \    //  
 may be   could be   must be   ought to be   might be   have been   had been

z    z    z    \ \    //  
 may not be   must not be   might not be   have not been   had not been

u    u    u  
 can not be   ought not to be   could not be

## 3. Other auxiliary verbs.

o	—	p	┐
is, am there is	are there are	was there was	were there were
⤿	⤿	⤿	⤿
be	being	been	to be
⤿	⤿	⤿	⤿
do	doing	done	to do
	⤿	⤿	
	does	did	

§ VI. *Abbreviations for prefixes and terminations.*

1. The best method of abbreviating *prefixes*, such as *ex*, *in*, *un*, *per*, *pro*, *pre*, *con*, *com*, etc., is to use one or more of the characters which represent the sounds contained in the prefix, rather than to use detached marks. The characters may, in many cases, be combined together or written in a briefer form to show that they are intended for prefixes. For instance *ex* may be represented by the characters for *k* and *s* written together; *in* or *un* by the character for *n* made smaller than usual; *per* by the character for *p*; *pro* or *pre* by the character for *pr*; *con* by the character for *k* with a



short stroke downward to the left for the *n*; and *com* by the downward stroke of the *m* character written in a curved form to represent both the *m* and the *k* sound. A table of abbreviations of this sort will be found at the end of this chapter.

2. Some of the *terminations of nouns*, such as *ment*, *ness*, *tion*, *sion*, *ion*, *ance*, *ence*, may be denoted by a *straight stroke* through the preceding part of the word, adding the *s* character for a plural termination, or the *d* character for final *ed*, at the end of the stroke.

3. *Adjective terminations*, such as *ing*, *ful*, *ous*, *ious*, *eous*, *ble*, *able*, *ible*, may be represented by a *dot at the end of the preceding character*.

4. The *adverbial terminations* *ly* and *ward* may be represented by a *dot at the side of the preceding character*.

5. The signs for terminations can be used together. The termination *fulness* (*joyfulness*), for instance, may be represented by a dot at the end of, and a stroke through, the preceding character.

§ VII. *Word-signs for words denoting position or direction.*

above	below	over	under	upon	beneath	upward	downward

before	behind	in front (of)	in the rear (of)	towards	from	backward	forward

within	without	inside (of)	outside (of)	into	out of	inward	outward

through	against	along	beyond	between	beside or besides

at the beginning	in the middle	at the end	at the top	at the bottom	across

the former	the latter	the preceding	the following	equal (to)	unequal (to)

§ VIII. *Long-hand abbreviations, punctuation marks, etc.*

1. The same abbreviations that are used in ordinary long-hand writing may also be used here, for example :

greater than	less than	in addition to	multiplied by	divided by

2. The ordinary punctuation marks, quotation marks, numerals, etc., may also be used, except that a small cross should be substituted for the *period*.

3. The ordinal words *first*, *second*, *third*, *fourth*, etc., may be represented by a dot at the side of the numeral figure, and *firstly*, *secondly*, etc., by an additional dot. The words *once*, *twice*, *thrice*, may be represented by a small circle at the side of the figure.

4. A *pause* may be denoted, as in long-hand writing, by a *dash*; and *emphasis* by a line drawn under the words emphasized.

5. Words which in long-hand begin with a capital letter may be denoted in short-hand by a small mark / written above them.

EXAMPLE I.

THE GRANDEUR OF PEACE.—*Sumner.*

WHATEVER may be the judgment of poets, of moralists, of satirists, or even of soldiers, it is certain that the glory of arms still exercises no mean influence over the minds of men. The art of war, which has been happily termed by a French divine, the baleful art by which men learn to exterminate one another, is yet held, even among Christians, to be an honorable pursuit; and the animal courage, which it stimulates and develops, is prized as a transcendent virtue. It will be for another age, and a higher civilization, to appreciate the more exalted character of the art of benevolence—the art of extending happiness and all good influences, by word or deed, to the largest number of mankind—which, in blessed contrast with the misery, the degradation, the wickedness of war, shall shine resplendent, the true grandeur of peace. All then will be willing to join with the early poet in saying, at least,

“Though louder fame attend the martial rage,  
’Tis greater glory to reform the age.”

. . . . .  
Does any one ask for the signs of this approaching era?  
The increasing beneficence and intelligence of our own day,

the broad-spread sympathy with human suffering, the widening thoughts of men, the longings of the heart for a higher condition on earth, the unfulfilled promises of Christian progress, are the auspicious auguries of this happy future. As early voyagers over untried realms of waste, we have already observed the signs of land. The green twig and fresh red berry have floated by our bark; the odors of the shore fan our faces; nay, we may seem to descry the distant gleam of light, and hear from the more earnest observers, as Columbus heard, after midnight, from the mast-head of the Pinta, the joyful cry of Land! Land! and lo! a new world broke upon his early morning gaze.

## EXAMPLE II.

### THE CHARACTER OF TRUE ELOQUENCE.—*Webster.*

When public bodies are to be addressed on momentous occasions, when great interests are at stake, and strong passions excited, nothing is valuable in speech farther than as it is connected with high intellectual and moral endowments. Clearness, force, and earnestness, are the qualities which produce conviction. True eloquence, indeed, does not consist in speech. It cannot be brought from far. Labor and learning may toil for it, but they will toil in vain. Words and phrases may be marshalled in every way, but they cannot compass it. It must exist in the man, in the subject, and in the occasion. Affected passion, intense expression, the pomp of declamation, all may aspire to it; they cannot reach it.

It comes, if it come at all, like the outbreking of a fountain from the earth, or the bursting forth of volcanic fires, with spontaneous, original, native force. The graces taught in the schools, the costly ornaments and studied contrivances of speech, shock and disgust men, when their own lives, and the fate of their wives, their children, and their country, hang on the decision of the hour. Then words have lost their power, rhetoric is vain, and all elaborate oratory contemptible. Even genius itself then feels rebuked and subdued, as in the presence of higher qualities. Then patriotism is eloquent; then self-devotion is eloquent. The clear conception, outrunning the deductions of logic, the high purpose, the firm resolve, the dauntless spirit, speaking on the tongue, beaming from the eye, informing every feature, and urging the whole man onward, right onward, to his object—this, this is eloquence; or rather it is something greater and higher than all eloquence, it is action, noble, sublime, god-like action.

### EXAMPLE III.

#### THE STAR SPANGLED BANNER.

O say, can you see, by the dawn's early light,  
What so proudly we hailed at the twilight's last gleaming;  
Whose broad stripes and bright stars, through the perilous fight,  
O'er the ramparts we watched were so gallantly streaming!  
And the rockets' red glare, the bombs bursting in air,  
Gave proof through the night that our flag was still there;  
O say, does that Star-Spangled Banner yet wave  
O'er the land of the free and the home of the brave!

On the shore, dimly seen through the mists of the deep,  
Where the foe's haughty host in dread silence reposes,  
What is that which the breeze, o'er the towering steep,  
As it fitfully blows, now conceals, now discloses!  
Now it catches the gleam of the morning's first beam,  
In full glory reflected now shines on the stream;  
'Tis the Star-Spangled Banner! O, long may it wave  
O'er the land of the free and the home of the brave!

And where are the foes who so vauntingly swore  
That the havoc of war and the battle's confusion,  
A home and a country should leave us no more?  
Their blood hath washed out their foul footsteps' pollution!  
No refuge could save the hireling and slave  
From the terror of flight or the gloom of the grave;  
And the Star-Spangled Banner in triumph shall wave  
O'er the land of the free and the home of the brave!

O, thus be it ever, when freemen shall stand  
Between their loved homes and the war's desolation!  
Blessed with victory and peace, may the heaven-rescued land  
Praise the Power that hath made and preserved us a Nation.  
Then conquer we must, when our cause it is just,  
And this be our motto, "In God is our trust;"  
And the Star-Spangled Banner in triumph shall wave  
O'er the land of the free and the home of the brave!

## EXAMPLE IV.

## CROSS-EXAMINATION OF A WITNESS.\*

Q. You have produced a note-book of original stenographic report of a speech of the President?

A. Yes, sir.

Q. Is it of the whole speech?

A. Of the whole speech.

Q. Was it wholly made by you?

A. By me; yes sir.

Q. How long did the speech occupy in the delivery?

A. Well, I suppose some twenty or twenty-five minutes.

Q. By what method of stenographic reporting did you proceed on that occasion?

A. Pitman's system of phonography.

Q. Which is, as I understand, reporting by sound, and not by sense?

A. We report the sense by the sound.

Q. I understand you report by sound wholly?

A. Signs.

Q. And not by memory of or attention to sense?

A. No good reporter can report unless he always pays attention and understands the sense of what he is reporting.

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\* See Impeachment of Andrew Johnson, Vol. I, p. 282. In the example the questions in cross-examination are distinguished from the answers of the witness by two strokes crossing each other before the questions, and a vertical stroke before the answers. Questions in direct examination may be marked by writing before them a stroke slanting downward from right to left. The questions may be numbered by placing the number over the crossed lines or the slanting line. Any interruptions, such as objections by counsel, questions or remarks by the court, arguments on objections, etc., should be separated by parenthesis-marks.



Q. That is the very point I wish to arrive at, whether you are attending to the sound and setting it down in your notation, or whether you are attending to the sense and setting it down from your memory or attention to the sense?

A. Both.

Q. Both at the same time?

A. Yes, sir.

Q. Your characters are arbitrary, are they not; that is, they are peculiar to your art?

A. Yes, sir.

Q. They are not letters?

A. No, sir.

Q. Nor words?

A. We have word signs.

Q. But generally sound signs?

A. We have signs for sounds, just as the letters of the alphabet represent sounds.

Q. But not the same?

A. No, sir.

. . . . .

Q. You do not make a sign for every word?

A. Almost every word. "Of the" we generally drop, and indicate that by putting the two words closer together. Of course, we have rules governing us in writing.

Q. That is, you have signs which belong to every word, excepting when you drop the particles?

A. Yes, sir.

Q. But not, as a matter of course, a sign that is the representative of a whole word?

A. Yes, sir ; we have signs representing words.

Q. Some signs?

A. Yes, sir.

Q. For instance, for the word "jurisprudence," you have no one sign that represents it?

A. No, sir ; I should write that "j-r-s-p."

Prefixes				Terminations			
per, par	2	emph, imph	2	cont	6	advent	ment
ap	1	mis	2	counter	6	gov	ernment
op	1	mag	2	contr	4	kind	ness
pre, pro, pri	1	in, en, un	1	com	2	action	
rim, prou,	1	inim, unim	1	incom	2	temper	ance
ab	1	ant, ent, int	1	recom	6	despot	ism
ob	2	inst	1	circum	1	giving	
trans	2	instr	6	ex	1	powerful	
dis	2	ent, int	1	exam, exem	6	advantageous	
disim, disen	1	sup	1	exp	1	possible	
disem	1	super	2	expr	1	reasonably	
disc	1	sub	1	expl	1	watchfulness	
deser, diser	1	re	1	ext	1	early	
discl	1	rem	2	extr	1	onward	
emp, imph	1	co, cor	1	min	1	superior	
emb, imb	1	con	1	incr	1	'ful	
emph, imph	1	incom, uncon	2	infl	1	'nion	
embr	1	recom	1	infr	1	'less	

*Contractions.*

<i>j</i>	<i>the</i>	<i>l</i>	<i>far</i>	<i>v</i>	<i>in an</i>	<i>-</i>	<i>all</i>
<i>so</i>	<i>this</i>	<i>g</i>	<i>farther</i>	<i>g</i>	<i>in the</i>	<i>-</i>	<i>whole</i>
<i>so</i>	<i>thus</i>	<i>f</i>	<i>further</i>	<i>go</i>	<i>in this</i>	<i>-</i>	<i>wholly</i>
<i>so</i>	<i>there</i>	<i>l</i>	<i>off</i>	<i>so</i>	<i>in that</i>	<i>o</i>	<i>also</i>
<i>so</i>	<i>therefore</i>	<i>l</i>	<i>oft</i>	<i>7</i>	<i>on</i>	<i>g</i>	<i>although</i>
<i>so</i>	<i>then</i>	<i>f</i>	<i>often</i>	<i>g</i>	<i>on the</i>	<i>so</i>	<i>always</i>
<i>so</i>	<i>that</i>	<i>l</i>	<i>after</i>	<i>so</i>	<i>on this</i>	<i>-</i>	<i>like</i>
<i>so</i>	<i>those</i>	<i>o</i>	<i>hereafter</i>	<i>so</i>	<i>on that</i>	<i>7</i>	<i>alone</i>
<i>so</i>	<i>other</i>	<i>l</i>	<i>aforesaid</i>	<i>1</i>	<i>only</i>	<i>l</i>	<i>aloft</i>
<i>so</i>	<i>to the</i>	<i>l</i>	<i>very</i>	<i>v</i>	<i>no, know</i>	<i>-</i>	<i>alike</i>
<i>so</i>	<i>at the</i>	<i>o</i>	<i>evil</i>	<i>x</i>	<i>nothing</i>	<i>o</i>	<i>let</i>
<i>so</i>	<i>of</i>	<i>o</i>	<i>full</i>	<i>v</i>	<i>nor</i>	<i>g</i>	<i>long</i>
<i>so</i>	<i>of the</i>	<i>so</i>	<i>fulfil</i>	<i>o</i>	<i>now</i>	<i>1</i>	<i>why</i>
<i>so</i>	<i>of this</i>	<i>l</i>	<i>graphic</i>	<i>o</i>	<i>not</i>	<i>4</i>	<i>while</i>
<i>so</i>	<i>of that</i>	<i>-</i>	<i>by</i>	<i>o</i>	<i>and</i>	<i>-</i>	<i>where</i>
<i>so</i>	<i>of those</i>	<i>g</i>	<i>by the</i>	<i>o</i>	<i>and so forth</i>	<i>so</i>	<i>wherefore</i>
<i>so</i>	<i>if</i>	<i>g</i>	<i>both</i>	<i>o</i>	<i>until</i>	<i>7</i>	<i>when</i>
<i>so</i>	<i>for</i>	<i>on</i>	<i>subject</i>	<i>o</i>	<i>entire</i>	<i>g</i>	<i>whether</i>
<i>so</i>	<i>for the</i>	<i>o</i>	<i>object</i>	<i>o</i>	<i>entirely</i>	<i>g</i>	<i>with</i>
<i>so</i>	<i>for this</i>	<i>so</i>	<i>objection</i>	<i>so</i>	<i>unless</i>	<i>so</i>	<i>with the</i>

v	yes	q	certain	9	some	re	just
w	yet	q	uncertain	X	something	re	just as
7	person	~	did	1	come, came	re	just like
7	personally	~	did the	6	comes	o	as
~	purpose	~	down	7	become	~	as follows
~	part	~	during	f	circumstance	o	as far as
~	partly	L	made	8	circumstances	o	as well as
~	peculiar	L	make	7	among	8	as much as
~	particular	~	more	6	except	o	as soon as
~	present	~	moreover	6	excepting	o	as long as
~	presently	~	memory	6	example	L	food
~	presence	~	moment	L	good	~	doom
~	principle	L	most	U	give	~	gloom
~	proper	~	almost	U	given	~	moon
~	appropriate	~	utmost	~	together	~	move
~	to	~	much	~	contrive	~	soon
~	'tis	~	as much	~	country	~	new
~	till	~	so much	~	concerning	~	youth
~	still	~	too much	~	general	~	booth
~	attempt	~	same, seem	~	generally	~	wound

## Departed Days—Holmes.

*Long-hand*  
 Yes, dear departed, cherished days,  
 Could Memory's hand restore  
 Your morning light, your evening rays  
 From Time's gray urn once more,  
 Then might this restless heart be still,  
 This straining eye might close,  
 And Hope her fainting pinions fold,  
 'While the fair phantom rose.

*Short-hand*  
 Yes, dear departed, cherished days,  
 Could Memory's hand restore  
 Your morning light, your evening rays  
 From Time's gray urn once more,  
 Then might this restless heart be still,  
 This straining eye might close,  
 And Hope her fainting pinions fold,  
 'While the fair phantom rose.

But like a child in oceans arms,  
 We strive against the stream,  
 Each moment farther from the shore  
 Where life's young fountains gleam,  
 Each moment fainter wave the fields,  
 And wider rolls the sea;  
 The mist grows dark—the sun goes down—  
 Day breaks—and where are we?

But like a child in oceans arms,  
 We strive against the stream,  
 Each moment farther from the shore  
 Where life's young fountains gleam,  
 Each moment fainter wave the fields,  
 And wider rolls the sea;  
 The mist grows dark—the sun goes down—  
 Day breaks—and where are we?



True Eloquence — *Webster.*

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840.



## The Star Spangled Banner

|                               |                           |
|-------------------------------|---------------------------|
| 19, '9, 78 80 82, 84,         | 86 88 90 92 94 96         |
| 88 90 92 94 96 98;            | 100 102 104 106 108 110,  |
| 112 114 116 118 120, 122 124, | 126 128 130 132 134 136,  |
| 138 140 142 144 146 148!      | 150 152 154 156 158 160!  |
| 162 164 166 168 170 172,      | 174 176 178 180 182 184,  |
| 186 188 190 192 194 196;      | 198 200 202 204 206 208,  |
| 210 212 214 216 218 220       | 222 224 226 228 230 232   |
| 234 236 238 240 242 244!      | 246 248 250 252 254 256!  |
| 258 260 262 264 266 268,      | 270 272 274 276 278 280,  |
| 282 284 286 288 290 292,      | 294 296 298 300 302 304,  |
| 306 308 310 312 314 316,      | 318 320 322 324 326 328,  |
| 330 332 334 336 338 340!      | 342 344 346 348 350 352!  |
| 354 356 358 360 362 364,      | 366 368 370 372 374 376,  |
| 378 380 382 384 386 388,      | 390 392 394 396 398 400,  |
| 402 404 406 408 410 412,      | 414 416 418 420 422 424,  |
| 426 428 430 432 434 436,      | 438 440 442 444 446 448,  |
| 450 452 454 456 458 460!      | 462 464 466 468 470 472!  |
| 474 476 478 480 482 484,      | 486 488 490 492 494 496,  |
| 498 500 502 504 506 508,      | 510 512 514 516 518 520,  |
| 522 524 526 528 530 532,      | 534 536 538 540 542 544,  |
| 546 548 550 552 554 556,      | 558 560 562 564 566 568,  |
| 570 572 574 576 578 580,      | 582 584 586 588 590 592,  |
| 594 596 598 600 602 604,      | 606 608 610 612 614 616,  |
| 618 620 622 624 626 628,      | 630 632 634 636 638 640,  |
| 642 644 646 648 650 652,      | 654 656 658 660 662 664,  |
| 666 668 670 672 674 676,      | 678 680 682 684 686 688,  |
| 690 692 694 696 698 700,      | 702 704 706 708 710 712,  |
| 714 716 718 720 722 724,      | 726 728 730 732 734 736,  |
| 738 740 742 744 746 748,      | 750 752 754 756 758 760,  |
| 762 764 766 768 770 772,      | 774 776 778 780 782 784,  |
| 786 788 790 792 794 796,      | 798 800 802 804 806 808,  |
| 810 812 814 816 818 820,      | 822 824 826 828 830 832,  |
| 834 836 838 840 842 844,      | 846 848 850 852 854 856,  |
| 858 860 862 864 866 868,      | 870 872 874 876 878 880,  |
| 882 884 886 888 890 892,      | 894 896 898 900 902 904,  |
| 906 908 910 912 914 916,      | 918 920 922 924 926 928,  |
| 930 932 934 936 938 940,      | 942 944 946 948 950 952,  |
| 954 956 958 960 962 964,      | 966 968 970 972 974 976,  |
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